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THE
SOUTHERN CULTIVATOR,

A MONTHLY JOURNAL,

Devoted to the Interests of Southern Agriculture,

AND

DESIGNED TO IMPROVE BOTH THE SOIL AND THE MIND;

TO

ELEVATE THE CHARACTER OF THE TILLERS OF THE SOIL,

AND TO

INTRODUCE A MORE ENLIGHTENED SYSTEM OF AGRICULTURE.

ILLUSTRATED WITH NUMEROUS ELEGANT ENGRAVINGS.

DANIEL LEE, M. D. AND D. REDMOND, EDITORS.

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SOUTHERN CULTIVATOR.



N. ORR. SO. N.Y.

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

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SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

WHAT SHALL BE DONE FOR SOUTHERN AGRICULTURE?

At the commencement of the *Thirteenth Volume* of the *Southern Cultivator* we desire to raise the question: What shall be done for Southern Agriculture? Is it really worth while to attempt any new enterprise for the advancement of this great interest? If it be said that something more ought to be undertaken by the friends of substantial progress, it is pertinent to inquire what that something shall be? We can comprehend a state of public opinion, in which a fair majority is in favor of some action to develop the true principles of tillage and husbandry, but owing to a disagreement as to the best plan of operations, or how to attain the ends sought, all effective action is prevented. If it were possible to unite all the friends of agriculture in a common effort for its elevation at the South, it is plain to our mind that its profits and honors would soon be double what they now are. But how to unite the owners and cultivators of the soil in any measure whatever for their mutual benefit is a social and political problem which no one has hitherto been able to solve. A thousand and one schemes have been devised by fertile intellects to improve society, that utterly failed, either from some inherent defect, or because the people preferred to remain in their old ways, and successfully resisted all efforts to ameliorate their condition. The *vis inertia*, or dead weight of agricultural traditions that ever oppose all changes, is an element too little considered by many earnest advocates of agricultural reforms. Little energy is witnessed in the popular mind in behalf of rural arts and sciences, simply because no one is able to reach its living sensibilities. The human understanding can only act as it is acted upon; and it is by no means an easy task to compel a torpid brain to think on any subject. This labor of provoking thought is often the most thankless imaginable; and yet without it, the first step toward a better system of agriculture would never be taken. Southern public opinion has about half opened one eye to the growing evil of taking millions of tons of crops out of the bosom of Mother Earth while giving her little or nothing in return to recuperate her exhausted energies. Had one eye been wide awake for the last twelve years in which this journal has been published, the people would now be ready to consider the grand question: How they can best feed the land that feeds them. But never having thought of the real wants of an advancing civilization; nor believed human progress

practicable, they are profoundly ignorant of the requirements of the Planting interest, and are no more prepared to remedy existing defects than a blind man is to teach the beauties and combinations of colors.

It is true that the best informed in the community admit that *something* should be done to change for the better the general character and results of Southern tillage; but they are by no means agreed as to what that something shall be. Propose what you will to increase your professional knowledge, and to communicate the information to the masses, and ten years labor will barely suffice to command the popular suffrage for ever so good a measure. This tardiness, however, of popular appreciation, ought not to prevent the true friends of agriculture from proposing such plans for its improvement as shall appear to be wise and proper.

If nothing is proposed nor attempted, it is plain that nothing whatever will be done, and the impoverishment of Southern soil must go on increasing from year to year as rapidly as our field laborers increase. That such is our present practice admits of no reasonable doubt. Not one acre in a thousand under the plow receives a fair return in manure for the crops it yields, take ten or twenty years together. Restitution for all the cotton grown and sent to distant markets, is a matter which the planting States have yet to take into consideration for the first time. Indeed, the very raw material of crops—the things out of which all agricultural plants are formed—have yet to be known to millions of farmers and planters. Until the cultivator sees the elements that really make the staples which he sells and knows whence they are derived, he can hardly begin to husband his resources aright.

Reading farmers need not to be told that *ammonia* and *potash* are the two most expensive constituents of grain and cotton. Nevertheless, additional experiments are needed to ascertain the best ways and means to accumulate these valuable alkalies on the farm for agricultural purposes. Deeply sensible of our lack of knowledge on this and many kindred subjects, the writer has long urged the necessity of having a few well-conducted experimental farm in this country to test by practice all the best suggestions of science. Now, science and practice rarely come near enough to speak to each other. They should be friends, and work cordially together in the same field. By the munificence of a patriotic and distinguished farmer, provision has been made for cultivating and teaching the science of agriculture in the University of Georgia. Appliances to demonstrate in a satisfactory manner on broad acres the principles of the most advanced farm economy, are still wanting. No more verbal instructions, no chemical manipulations within the four walls of a laboratory, will satisfy plain, out-door farmers. They natur-

ally, and we think rightfully, expect results in common agriculture to justify all that is stated in the lecture room. In a word, theory is valueless beyond what experience fully sustains in practice. To cultivate rural arts as well as rural sciences, successfully, requires not a little care, study and patient devotion to one purpose. Any one who will undertake to answer the question, why agriculture has made so little progress in five thousand years can hardly fail to see many impediments in the way of its improvement. Tillage for any length of time could never inform a man as to the nature of the substances taken out of the earth to make any plant which he might chance to cultivate. Hence, without the aid of analytical chemistry he could never have known what are the elements of simple water, of carbonic acid gas, of the atmosphere, nor of the soil, or its products. With the light of chemistry, geology, physiology, and other natural sciences, the practical man may now modify his farming in a thousand ways to his advantage. He is, however, often in doubt what changes to make.

These doubts can only be removed by wisely conducted experiments. Instead of requiring a million farmers to try, each for himself, any experiments that may be needed to settle a point in tillage or husbandry, it would be vastly more economical and satisfactory, to give a few reliable men all the necessary facilities for making the required experiments, which they could execute for the equal benefit of the whole agricultural community. The fact should never be overlooked that valuable experiments in agriculture are generally expensive; and hence, where funds are not provided for that purpose, and much pains taken to avoid error, experiments are either not reliable, or not instructive.

Substantial advancement in any calling implies the development of new truths, and of unquestioned additions to the aggregate stock of knowledge. If we can add nothing to our present mental capital in our profession, then our whole capacity for improvement is exhausted. Such an assumption would be as discreditable to our intellects, as prejudicial to our pecuniary interests. There is a way in which man's capacity for improvements may be indefinitely expanded in agricultural knowledge, as in that of other honorable and useful callings. The happy union of art and science, of mental culture with field culture, will alone attain this noble result. Rural sciences cannot advance without the assistance of rural arts. Believing these views to be sound, we are anxious to persuade the public to make provision for combining researches in the elements of agricultural practice and sciences at the same educational institution. Such researches may be expected, not only to elucidate all the more important facts now known in our profession but to extend our knowledge into unexplored regions, and bring to light new truths of great importance. Once on the right track, our progress will be that of railroad speed compared with the slow motion of the old-fashioned ox-cart.

We cannot but regard it as a misfortune that the masses are so slow to discover the propriety of studying the scientific principles of agriculture in connection with their practice. From the lack of popular sympathy no legislature in this country has founded an agricultural school; nor has the experiment of such an institution ever been fairly tried in this Republic. Public opinion is everywhere against the scheme, acting on the wrong principle of condemning a purely educational idea without a trial. Coming generations will not be so hostile to agricultural science, but foster it with the most anxious solicitude for its invaluable fruits.

Applying science to every pursuit in civilized communities, no art will be left to grope its way in the dark, as the art of agriculture now does; but all will enjoy the benefits of sound, well tested principles to guide their operations.

All useful arts will flourish when based on nature's laws and cultivated for the improvement of society. Now, the leading end aimed at is not so much to serve and elevate mankind, as to gratify an idle love of riches for useless display and mischievous vanity. A taste for science has to be created before its union with agricultural and mechanical labor can be general. Slowly, but certainly such a taste is growing up in the popular understanding. Perhaps nothing better can be done at this time to promote the culture of this taste than to extend the circulation of this journal. It aims to diffuse as much science among agriculturists as will be acceptable to its readers. As a medium through which thousands in several States may constantly teach one another, it is rendering the public an invaluable service; while at the same time, it is working an auspicious change in public opinion in favor of agricultural literature, text-books, schools, experimental farms and plantations. Our agricultural societies are also worthy of generous support as a means of improvement. All the great achievements of the age in which we live have been wrought by wise co-operative efforts; and the principle of association is yet to confer infinitely greater benefits on the study and practice of rural economy. As an isolated farmer, the advantages of each are small indeed for high professional advancement, and intellectual culture. To enlarge and improve these too narrow advantages is the hope and the wish of our heart. It is the object to the attainment of which our humble life is devoted.

L.

NUTRITION IN VARIOUS GRAINS.

WHEAT is one of the most important of all crops. The grain contains from 50 to 70 per cent, of starch, from 10 to 20 per cent. of gluten, and from 3 to 5 per cent. of fatty matter. The proportion of gluten is said to be the largest in the grain of quite warm countries.

It is a singular fact that, in all the seed of wheat and other grains, the principal part of the oil lies near or in the skin, as also does a large portion of gluten. The bran owes to this much of its nutritive and fattening qualities. Thus, in refining our flour to the utmost possible extent, we diminish somewhat its value for food. The phosphates of the ash also lie, to a great degree, in the skin. The best fine flour contains about 70 pounds of starch to each hundred. The residue of the hundred pounds consists of 10 or 12 pounds of gluten, 6 to 8 pounds of sugar and gum, and 10 to 14 pounds of water, with a little oil.

Rye flour more nearly resembles wheaten flour in its composition, than any other; it has, however, more of certain gummy and sugary substances, which make it tenacious, and also impart a sweetish taste. In baking all grains and roots which have much starch in them, a certain change takes place in their chemical composition. By baking flour becomes more nutritious, and more easily digested, because more soluble.

Barley contains rather less starch than wheat, also less sugar and gum. There is little gluten, but a substance somewhat like it, and containing about the same amount of nitrogen.

Oat meal is little used as food in this country, but it is equal, if not superior, in its nutritious qualities, to flour from any of the other grains; superior, I have no doubt, to most of the fine wheaten flour of the northern latitudes. It contains from 10 to 18 per cent. of a body having about the same amount of nitrogen or gluten. Besides this there is a considerable quantity of sugar and gum, and from 5 to 6 per cent of oil or fatty matter, which may be obtained in the form of a clear, fragrant liquid. Oat meal cakes owe their peculiar agreeable taste and smell to this oil. Oat meal, then, has not only an abundance of substance containing nitrogen, but is also quite fattening. It is, in fact, an excellent food for working animals, and, as

has been abundantly proved in Scotland, for working men also.

Buckwheat is less nutritious than the other grains which we have noticed. Its flour has from 6 to 10 per cent. of nitrogenous compounds, about 56 per cent. of starch, and from 5 to 8 per cent. of sugar and gum. In speaking of buckwheat or of oats, we of course mean without husks.

Rice was formerly supposed to contain little nitrogen; but recent examinations have shown that there is a considerable portion, some 6 or 8 per cent., of a substance like gluten. The per centage of fatty matter and of sugar is quite small, but that of starch much larger than any grain yet mentioned, being between 80 and 90 per cent.; usually about 82 per cent.

Indian corn is the last of the grains that we shall notice. This contains about 60 per cent. of starch, nearly the same as in oats. The proportion of oil and gum is large—about 10 per cent.; this explains the fattening properties of Indian meal, so well known to practical men. There is, besides, a good portion of sugar. The nitrogenous substances are also considerable in quantity—some 12 or 16 per cent. All these statements are from the prize essay of Mr. J. H. Salisbury, published by the New York State Agricultural Society. They show that the results of European chemists have probably been obtained by the examination of varieties inferior to ours; they have not placed Indian corn much above the level of buckwheat or rice, whereas, from the above, it is seen to be "in most respects superior to any other grain."

Sweet corn differs from all other varieties, containing only about 18 per cent. of starch. Amount of sugar is of course very large; the nitrogenous substances amount to the very large proportion of 20 per cent.; of gum, to 13 or 14, and of oil, to about 11. This, from the above results, is one of the most nourishing crops grown. If it can be made to yield as much per acre as the hardier varieties, it is well worth a trial on a large scale.—*Prof. Newton.*

THE BEST KIND OF MULES.

At this time when the best class of mules will sell at \$300 per pair, the following from the *Farm and Shop*, published at Indianapolis, may be read with profit:

The mule is the great field laborer in the commanding staples of the South—cotton, sugar and rice—and as he is one of the annual exports of Tennessee, and as he will continue to be so, he is destined to hold even a higher position than heretofore among the live stock of the State. Mules of excessive heavy bone, or improper pampering, are generally lazy, or soon become so by labor, and become very slow; their driver may force them on, but in a few steps they take their slow natural steps again. Such mules are therefore almost worthless, and should not be bred if it can be avoided. The most perfect are not to be expected from the excessively large, coarse-boned jacks, or excessive high feeding, but from the laws of nature carried out to the greatest perfection by skilful breeding and feeding.

An error has existed for many years, and still exists, concerning the size of mules. Size has been made a measure of value in the mule, almost regardless of form and spirit, and so it has been in their sire, the jack.

I have been employing mule teams for twenty-five years in the cultivation of cotton in Mississippi, and my team now numbers one hundred. In this time, I have used every variety of the mule (except the most inferior kind) that has ever been grown.

At the commencement of planting operations, I adopted the prevalent error, that size was the measure of value, and pursued it for many years, much to my prejudice. By

long trial, and by comparing the relative performances and lastingness of the large team which I have used, aided by observation and reflection, I am fully satisfied that the medium sized mule, full of spirit and action, with a neat firm leg and a round body, with his leavers set right for easy motion, his head and ears up, ready to move at the word, is the animal of most value of this kind.

The laws of nature cannot be violated with impunity. The jack when grown within scope of these laws, is a small animal. The mule a medium between the jack and horse. Both the jack and mule by a hot-bed growth may be forced to be large animals. But in this forcing process, now more extensively pursued by Kentucky than any other State, what has been gained, and what lost?

They have gained large bone, coarse animals of large size, and at an early age full of defects, and soon ready to decay, because subject to disease, and large consumers of food.

They lost symmetry, spirit, action, lasting endurance, and permanent value.

The error that I especially aim at, is the abandonment of almost everything else for size. The best combination of the requisite qualities in the mule is not found in the production of a hot-bed policy, which by constant feeding with everything that will hasten growth, brings out a large, coarse, forced, overgrown, awkward animal, who decays as fast as he has grown. When he is designed for the valleys of the Southern rivers, where his service is active and his rations not very select, he wants more game, more spirit and action, more symmetry, and not too much size. Hence, our Tennessee mules, the produce of spirited jacks are really more valuable to the Southern planters than the produce of Kentucky under her present system.

This, no doubt, to some extent, is the fault of the purchasers South, who have not generally discovered their error. They demand large sizes, and pay in proportion to size; and this in part explains the policy of Kentucky. My opinion is, that size in a mule is nothing after they reach fifteen hands high, and that many under that height come up to the standard value, fitted for cotton plantations.

When compared to the blood horse, the mule is unfit for the saddle, pleasure, carriage, or any harness requiring rapid motion. His sire is an animal of slothful tendencies, of slow motion generally, and hence the necessity of improving this quality in the jack. Give him spirit and action, and stamina rather than great height. One conforms to the laws of nature, and the other violates them.

The Spanish and Maltese jacks have spirit generally, and for that reason are valuable as a cross; but they came to us without stamina, and with a contracted chest. These faults must be remedied by proper crossing, before they will produce the mule best suited for us.

What I have learned upon this subject is not from hearsay. I have purchased and grown all the mules which I have driven for 25 years in Mississippi. I have had an opportunity of knowing what they have done, and these opinions are the result of experience. This knowledge would have been of service to me in the commencement of my business, and I communicate it for the benefit of those who may adopt my opinion hereafter.

MARK COCKERILL.

Nashville, Tenn., 1854.

THE SHANGHAI FOWL.—This most gigantic of all fowls is at length universally admitted to be a native of that part of the Celestial Empire, called Shanghai, but owing to the circumstance of Cochin China having been the place whence it was imported into England first, the name of Cochin China has attached itself to the variety with a familiarity somewhat improper, it must be allowed.—*Ferguson on Poultry.*

FATTENING ANIMALS.

THERE are certain principles which apply to the feeding of all animals which we will shortly notice :

1. The *breed* is of great importance. A well bred animal not only affords less waste, but has the meat in the right places, the fibre is tender and juicy, and the fat is put on just where it is wanted. Compare the hind leg of a full blooded Durham ox, and a common one. The bone at the base of the tail extends much further in the former, affording more room for flesh, and the thigh swells out of convex or circular shape; while in the common ox it falls in, dishing and hollow. Now the "round" is the most valuable cut, and is only found in perfection in high-bred stock. The same is the case over the whole body. So well do eastern butchers understand this, that their prices are regulated by the breed, even where two animals are equally fat. They know that in a Durham or Hereford ox, not only will there be less offal in proportion to weight, but the greatest quantity of meat will be where it brings the highest price when retailed, and will be of a richer flavor and more tender fibre. The same is the case with hogs. A large hog may chance to make more meat on a given quantity of food than a small one, but the meat of the first will be coarse and tasteless compared with the other; and in the east, flavor and tenderness greatly regulate prices. Consequently, moderate sized, short-legged, small headed hogs, always, in the long run, beat large breeds out of flavor. In preparing for market, "fashion and taste" must be as much considered by the farmer as by the tailor. This one fact is at present revolutionizing the English breed of sheep. The aristocracy always paid high for small Welch and Scotch mutton; but the great consumers, the mechanics preferred large fat joints. The taste is now changed. In Manchester and other such cities, these large joints have become unsaleable; and all the efforts of the breeder are now turned towards small breeds maturing early, with comparatively little fat. According to late writers, the large Leicester and Cotswolds are going quite out of fashion. When we give \$3,000 for a Durham bull it is not that his progeny are "intrinsically" more valuable to that amount, but the increased value and the fashion together make up the difference. And it is thus, that while Durhams and Herefords are preferred for ships and packing, Devons are high in repute for private families. The joints are smaller, but the meat has a peculiar richness, probably found in no other kind of stock; and the proportionate waste is said to be less than in any other breed. Thus in the London market, the Scotch Kyloes, and then the Devons, (the former even smaller than the latter,) bring the highest price, because preferred by the aristocracy. So in Dublin, spayed heifers are sought for. But the breed also regulates the profit. There is nothing more certain than that one kind of animal will fatten to a given point on much less food than another, and as fattening our stock is only another mode of selling our grain and grass, those animals are to be preferred which come to maturity soonest, and fatten on the least food. The difference in hogs is very great and important. While some breeds must be fed for two or even three winters, others are full grown and fattened at ten months old; and the difference in profit is enormous. We cannot go into particulars, but the following rules may be considered as applicable to all: An animal may be expected to fatten easily when it has fine bone, and fine soft elastic skin, with thin or silky hair; the head and legs short, the "barrel" large, but chest and lungs small; and when it is quiet, sleepy, and easy in temper. An unquiet, restless, quick-tempered animal is generally a bad feeder, and unprofitable.

2. Much depends in fattening on outward and mechanical management. Fat is *carbon*, or the coal which supplies the body with heat. If we are exposed to cold, it is

burnt up in our lungs as fast as it is deposited by the blood; but if we are kept warm, by shelter or clothing, it is deposited throughout the body, as a supply on hand when needed. Warm stables and pens are a great assistance in fattening, and should never be neglected. So, also, quiet and peacefulness are important. Every excited action consumes some part of the body which has to be supplied by the food, and detracts from the fat. In the climate of Michigan, warm stables, regular feeding at fixed hours, and kind treatment, with perfect cleanliness, save many a bushel of grain. Animals fed at irregular times are always uneasy and fretting.

3. Ground and cooked food fatten much more profitably than raw food. Mr. Ellsworth found that hogs made as much flesh on one pound of corn ground and boiled to mush, as two pounds raw unground; though the first did not fatten quite as rapidly, as they could not consume as much food in the 24 hours. By grinding and soaking, ten hogs will each gain 100 pounds in weight, on the same food that five would do if it were raw.

4. A change of food helps in fattening. Thus an ox fed entirely on corn and hay will not fatten as fast, or as well, as one which has roots, pumpkins, ground oats or buckwheat, &c., fed to it at regular periods. The latter may contain intrinsically less nourishing matter than the corn, but the change produces some unknown effect on the stomach and system, that adds to the capability of depositing fat. The best feeders change the food very frequently, and find that they make a decided profit by so doing. Salt should be given with every meal to cattle—say an ounce a day. It preserves the appetite and prevents torpor of the liver, to which all fattening animals are subject. This torpor, or disease, is, to a certain extent, conducive to fat; but carried too far the animal sinks under it.

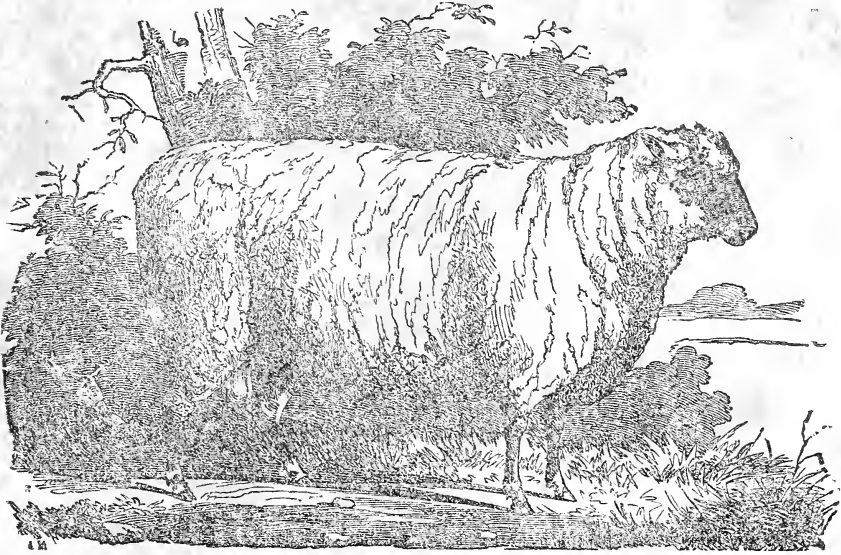
5. In cattle the skin should be particularly attended to. A fat animal is in an unnatural state, and consequently easily subject to disease. Taking no exercise, it has not its usual power of throwing off poisons out of the system; and if the skin is foul, the whole labor is thrown on the kidneys. It is found by experience that, oxen, regularly curried and cleaned daily, fatten better and faster than when left to themselves; and if the legs are pasted with dung, as is too often the case, it seriously injures the animal.

6. Too much rich food is injurious. The stomach can only assimilate a certain quantity at once. Thus an ox will prosper better on 30 lbs. of corn and 30 lbs. of cob ground together daily, than on 40 lbs. of ground corn. These mixtures are also valuable and saving of cost for hogs when first put in the pen. If an animal loses its appetite, the food should at once be changed, and if possible roots, pumpkins, or steamed hay may be given.

7. Oxen will fatten better if the hay or stalks are cut for them, but care must be taken not to cut too short. An inch in length is about the right size for oxen, half or three-quarters of an inch for horses.—*Farmer's Com. and Horticultural Gazette.*

HUMAN LIFE.—Ah! this beautiful world. Indeed, I know not what to think of it. Sometimes it is all gladness and sunshine, and heaven is not far off; and then it changes suddenly, and it is dark and sorrowful, and the clouds shut out the sky. In the lives of the saddest of us, there are bright days like this, when we feel as if we could take this great world in our arms. Then come the gloomy hours, when the fire will neither burn in our hearts or on our hearths, and all within is dismal, cold and dark. Believe, every heart has its secret sorrows, which the world knows not; and oftentimes we call a man cold when he is only sad.—*Longfellow.*

SOUTH DOWN SHEEP.



SOUTH DOWN BUCK.

THE South Down Breed is derived from the chalky hills of Sussex, on the British Channel. It is to be classed amongst the Down and Forrest Breeds, but it has been made to surpass them all by the effects of breeding and careful culture. It has been widely spread over all the south-eastern counties of England, and has passed into districts beyond the countries of the Chalk, taking the place of the pre-existing breeds of the downs and commons. The sheep of this breed are destitute of horns, have dark-colored faces and limbs, and produce a short felting wool fitted for preparation by the card. Their size varies with the locality, and the taste and opinions of the breeders; but they are of



SOUTH DOWN EWE.

greater weight, and bear heavier fleeces than the older sheep of the Sussex Downs. They are adapted to a lower range of pastures than the Black-faced Sheep and Cheviot breeds, and are better fitted for a dry and temperate climate than for a cold and moist one.—*People's Jour.*

Very superior samples of this breed of Sheep were shown at our late Fair, by R. PETERS, Esq., of Atlanta, who has been at much pains and expense to procure stock from some of the most noted breeders of the North and of England. He speaks very highly of their adaptation to the climate and general hardiness, of which his success thus far is sufficient evidence.—Ebs.

MURRAIN AND BLACK-LEG.

THESE diseases are the common pest among cattle at the west, particularly in malarious districts. Mr. J. D. Hall, of Champaign county, informs us that he cures it so far without fail by the use of spirits of turpentine. After bleeding the animal by cutting off the end of the tail, he gives for a dose to a grown steer one pint of the article and to a yearling one-half a pint. He has treated desperate cases with success in this way. An application of cold water is also made to the loins as a part of the treatment.

A neighbor of his has been successful in the same diseases with an article called "Perry Davis' Pain Killer," which may very likely be composed of spirits of turpentine chiefly—though we do not know of the fact. Of this article he gives a fifty cent bottle at a dose.

The spirits of turpentine is probably the cheaper medicine and it has the advantage of being known as to its composition. Very likely a much smaller dose would answer every purpose.—*Prairie Farmer.*

GROWING CLOVER AT THE SOUTH.

If it be practicable to grow profitable crops of red clover at the South, the fact ought to be generally known. Mr. Croom, of Greensboro, Alabama, makes the following statements on this subject in the November number of the *Soil of the South*: "A gentleman living in the neighborhood of my plantation, Mr. Geo. MINGE, made last year a bale of cotton of 500 lbs. to the acre on a lot which had been in clover several years, and which had been regularly mown and grazed, while the adjoining land of similar quality without the benefit of clover yielded not more than 500 lbs. of seed cotton. I have had the present year 275 fattening hogs besides my other stock on clover pasture. The grazing is fine at this time. I am sure that besides what is grazed, enough fell and dried up on the ground to make 80 tons of clover hay. There is one field of 35 acres not grazed at all, where the ground is covered one and a half to two inches deep with the dry stalks, and a fine second crop now out; and this field was sown in February last. The clover and stock business does not at all interfere with a full crop of cotton, corn, potatoes, and every other crop usually grown on the farm. There can be no doubt that the now ascertained fact of our lime lands being adapted to the growth of Red Clover appreciates their value 100 per cent. It is admitted to be true of the lands in Virginia, Tennessee and other States; and it is equally or more so in South Alabama."

We are inclined to believe that Mr. Croom is correct in his suggestions and opinions in reference to the adaptation of calcareous soils to the economical production of clover. Certain it is that the limestone lands of Western New York greatly excel all the freestone and granitic soils in that State, or any other known to us, in the luxuriant growth of this valuable plant. We still doubt whether the climate of "South Alabama" is as favorable to red clover as that of more Northern States; but the experience of Mr. Croom and of his neighbors affords valuable encouragement for others to try the experiment of cultivating this renovating crop. For dairy purposes, for grazing mules, horses, swine and sheep, clover has many advantages. Timothy hay, and that formed from other English grasses, as well as similar indigenous grasses at the South, contains too little organized nitrogen to be equal to clover in the production of flesh in domestic animals, cheese in milk, and other protein compounds. A careful experiment made in the city of Washington by a dairyman in feeding cut clover and cut timothy to a herd of cows giving milk, proved the superiority of the former for yielding milk—an article of almost universal consumption. This experiment decided the doubt with us whether to make on our own farm in the District of Columbia a meadow

of timothy or one of clover, in favor of the latter. But our land, like that of a large majority of our readers, lacks lime, and is therefore not naturally adapted to the production of this plant. Will the addition of lime *alone* to a freestone soil make it in all respects equal to a natural calcareous one? From much observation and some analyses, we venture to answer the above question in the negative. Calcareous earths are formed under peculiar circumstances which give them other important elements of fertility besides lime. Nevertheless, the application of lime to all lands that lack this mineral is good practice, although perchance other fertilizers may be needed. On many soils, lime alone appears to work wonders in developing agricultural resources never before known to exist.

In calling public attention to the value of clover and lime, it would not be difficult to adduce strong corroborative testimony to that of Mr. Croom, if we deemed it necessary to our purpose. Take lime and clover from the soil of Monroe county, in the Valley of the Genesee, and it would no longer yield, as it now does, a million and a half bushels of wheat a year; and a half million bushels more than any other county in the United States. Like the calcareous lands in South Alabama, Tennessee and Kentucky, these wheat and clover soils of Western New York have steadily advanced in price for thirty years. They are now worth about \$100 an acre, and pay a high interest at that, with wheat at two dollars a bushel in Rochester, as it is at this time.

For some reason, which we do not understand, the men who control the numerous railroads in Georgia do not encourage the transportation of lime for agricultural purposes, as wisdom would seem to dictate. The so-called improved lands of the State would give them twice the freight in cotton, grain and provisions, in groceries, hardware, salt and dry goods, and in travel, if these lands were properly limed. The soil supports the inhabitants of all the States, and they support the railroads. To improve the soil, therefore, is to enrich the owners of railroads as well as the owners of cultivated lands. And yet, railroad companies virtually prohibit the transportation of lime for agricultural purposes, over their roads! This short-sighted policy will not stand the test of criticism. It depreciates the value of railroad stock by keeping both the land and its cultivators too poor for high production.

If the hot summers of the South do not burn up clover plants; if they will increase the yield of cotton from 500 lbs. of lint in the seed to 500 lbs. of clean staple in the bag, per acre; and if "the lime lands of South Alabama have appreciated 100 per cent." because they are proved to be adapted to the growth of red clover, then there is no good reason why lime should not be as freely used in South Carolina and Georgia as it is in Delaware and Maryland. We do not condemn the cultivation of peas as a renovating crop, nor as a forage plant, by pointing out some of the advantages of growing clover for grazing purposes. Every farmer needs a plenty of rich pasturage at times when his pea-fields are not available. Such clover pastures as Mr. Croom speaks of are almost invaluable in making meat, mules, cows, and other stock. All poor land must be enriched before clover will flourish therein, either South or North. On many soils, particularly the red clays, lime alone will suffice; on others gypsum will do the needful; while on some, bones are required to meet the wants of clover, as of turnips and wheat. By adding lime and guano to poor land, we hope to get a fair return in clover. Manure of all kinds operates best on land that has a plenty of lime in it. This is a fact of great importance in the long run of farming. Manure rarely, if ever, fails to secure large clover, where the seed is good and well put in; but manure is a scarce article on many plantations. Guano is the best substitute for stable manure known to the writer.

LIST OF PREMIUMS.

Premiums Awarded by the Southern Central Agricultural Society, at the Ninth Annual Fair, held at Augusta, Ga., during the week, commencing on the 4th of December, 1854.

[Official Report.]

FIELD CROPS.

- T. J. Smith, Hancock co., best 20 bales Upland Cotton, \$20
T. J. Smith, Hancock Co., for the best 10 bales Upland Cotton, 15
W. W. Stone, Columbia Co., for the best 5 bales Upland Cotton, 10
A. Pope, Wilkes co., for the best 1 bale Upland Cotton, 5
JUDGES.—T. S. Metcalf, D. L. Adams, Antoine Poulain, A. Russell.

- Midleton Seago, Richmond co., for the largest crop of Sweet Potatoes grown per acre, &c., 740 bushels, \$20
W. A. Lenoir, Tennessee, for the largest crop of Oats grown on an acre, 41½ bushels, 20
John Dimon, Muscogee co., for the largest crop of Ground Peas per acre, 104 bushels 10
T. P. Jones, Green co., for the largest and best crop of Cotton produced on two acres of Upland, 4,169 lbs, 50

CROPS BY BOYS UNDER SIXTEEN YEARS OF AGE

- Y. H. Wynn, Habersham Co., for the largest quantity of Corn grown on one acre, 103 bushels 9 quarts, a Patent Laver Watch, in value, \$25
JUDGES.—E. H. Winfield, J. L. Whitten.

SAMPLES OF FIELD CROPS.

- John M. Turner, Augusta, Ga., for the best variety of Bread Corn, with two bushels as sample, \$10
R. C. Daniel, Oglethorpe Co., for the best bushel of Wheat, 10
G. M. Magruder, Columbia co., for the best Bushel of Oats, 5
J. Dimon, Muscogee co., for the best bushel of Barley, 5
W. W. Stone, —, for the best bushel of Field Peas, 10
Dr. G. Battery, Rome, Ga., for the best bushel Irish Potatoes, (a native Seedling) exhibited, 5
A. Griffith, Oglethorpe Co., for the best variety of Sweet Potatoes, two bushels exhibited, 10
A. Volger, Augusta, for the best box of chewing Tobacco, 5
A. Volger, Augusta, for the best box Segars, 5
A. Volger, Augusta, for the best box Smoking Tobacco, 5
JUDGES.—J. W. Moody, J. R. Stanford, J. H. McWhorter, Jacob Phinizy.

SHEEP.

FIRST CLASS—MERINOS.

- Col. J. W. Watts, Cassville, Ga., for the best pen of Merinos, \$20
Col. J. W. Watts, Cassville, Ga., for the second best pen of Merinos, 10
Col. J. W. Watts, Cassville, Ga., for the best pen of Merinos owned in Georgia, (twelve exhibited,) 10
Second class, no entries.

THIRD CLASS—MUTTON SHEEP—SOUTH-DOWNS.

- R. Peters, Atlanta, Ga., for the best pen, \$20
R. Peters, Atlanta, Ga., for the second best pen, 10

FOURTH CLASS—LONG WOOLS.

- Col. J. W. Watts, Cassville, for the best pen New Oxfordshire, 2
Col. J. W. Watts, Cassville, for the second best pen new Oxfordshire, 10

FIFTH CLASS—NATIVES AND GRADES.

- Col. J. W. Watts, Cassville, best pen of bucks and ewes, Merinos and Berkswells, exhibited, 20
Col. J. W. Watts, Cassville, second best pen of bucks and ewes, Broadtails and Natives, 10

SIXTH CLASS—FAT MUTTON.

- Col. J. W. Watts, Cassville, for the best pen of Fat Mutton, 10

CASHMERE, THIBET OR PERSIAN GOATS.

- Dr. J. B. Davis, Columbia, S. C., for the best buck and ewe, (Cashmere) 20
Dr. J. B. Davis, Columbia, S. C., for the second best buck and ewe grades, (Cashmere) 10

FLEECES OF WOOL.

- Col. J. W. Watts, Cassville, for the four best Merino Fleeces, 10
R. Peters, Atlanta, for best Southdown Fleeces 10

- Col. J. W. Watts, Cassville, for the best Longwool Fleeces, \$10
JUDGES—James Croswell, Chairman.

HOGS.

FIRST CLASS—SUFFOLKS.

- Col. A. G. Summer, S. C., for the best Bear, \$10
R. Peters, Atlanta, for the best Sow, 10
R. Peters, Atlanta, for the 2d best Sow, 5

SECOND CLASS—GRAZERS.

- R. Peters, Atlanta, for the best Sow, 10
R. Peters, Atlanta, for the 2d best Sow, 5
R. Peters, Atlanta, for the best Sow, 10
R. Peters, Atlanta, for the 2d best Sow, 5
R. Peters, Atlanta, for the best lot of Pigs, (not less than three) 10

THIRD CLASS—BERKSHIRES.

- Floyd Thomas, Augusta, for the best Sow, 10

FOURTH CLASS—NATIVES AND GRADES.

- W. E. Dearing, Augusta, for the best Sow, 10
W. E. Dearing, Augusta, for the 2d best Sow, 5
Fifth class—Fat Hogs—no entries.

SIXTH CLASS.

- Phineas Butler, Augusta, for the best and largest fat hog, 10
R. G. Butler, Augusta, for the 2d best and largest fat hog, 5

SEVENTH CLASS—LARGEST AND BEST HOG, GEORGIA RAISED.

- W. E. Dearing, Augusta, for the largest and best fat hog, Georgia raised, \$10
W. E. Dearing, Augusta, for the 2d largest and best fat hog, Georgia raised, 5

- JUDGES—John W. Moody, S. D. McLendon, Thomas Johnson, of Ky., Edward Persons.

CATTLE.

FIRST CLASS—DEVONS.

- Dr. M. M. Anderson, Cass co., Ga., for the best Devon Bull, 8 years old, \$20
Col. Jas. W. Watts, Cass co., for the best Devon Bull between 2 and 8 years old, 15
R. Peters, Atlanta, Ga., for the best Devon Bull, "Springfield," between 1 and 2 years old, 10
R. Peters, Atlanta, for best Devon Cow, "Splendid," 3 years old, 10
R. Peters, Atlanta, for the best Devon Bull-calf, (No. 4, 9 months old,) 5
R. Peters, Atlanta, for best Devon Heifer, "Loadstone," between 2 and 3 years old, 10
Col. A. G. Summer, Alston, S. C., for best Devon Heifer, "Alice," between 1 and 2 years old, 8
R. Peters, Atlanta, for best Devon Heifer Calf, "Jenny Lind," 6 months old, 5

SECOND CLASS—DURHAMS.

- Albert S. Lenoir, Loudon, East Tenn., for the best Bull, 3 years old, or upwards, \$20
Col. Jas. W. Watts, Cartersville, Ga., for the best Bull, "John," between 1 and 2 years old, 10

THIRD CLASS—AYRSHIRES.

- A. Griffith, Brookline, Ga., for the best Bull, \$20
R. Peters, Atlanta, Ga., for best Cow, "Janet," 10

GRADES.

- Aaron Ruff, Calhoun, Ga., for best Milking Cow of mixed breed, \$20
Wm. J. Eve, Richmond, co., for the best Native Milch Cow, 25
Phineas Butler, Augusta, for 2d best Native Milch Cow, 10

WORKING OXEN.

- Geo. W. L. Twigg, Richmond co., Ga., for the best yoke of Oxen, \$20
Geo. W. L. Twigg, for the best fat Steer, 5
A. S. Lenoir, Loudon, Tennessee, for best fat Heifer, 5
JUDGES—John D. Williams, Robert C. Daniel, Jas. M. Mayne.

HORSES.

FIRST CLASS—HORSES OF ALL WORK.

- Alexander M. Brown, Morgan Co. Ga., for the best Stallion over 4 years old, \$20
Wm. H. Harris, Richmond Co. Ga., for second best Stallion over 4 years, 10
Wm. H. Harris, Richmond Co. Ga., for the best horse colt, 5
James Millican, Jackson co., Ga., for best Brood Mare with colt by her side, 20
Geo. M. Magruder, Columbia Co., Ga., for 2d best Brood Mare and Colt, 10
James M. Davidson, Greene Co., Ga., best Mare 4 years old and over, 10

Jno. L. Hurst, Athens, East Tenn., for the best Mare, 4 years old and over, \$5
 James Millican, Jackson Co., Ga., for best Filly, 3 years old, 8
 B. Thornton, Jackson co., Ga., for best Filly 2 years old, 5
 W. J. Thompson, for best Filly 1 year old, 5
 JUDGES.—E. R. Ware; J. B. Carlton; Jas. A. Price; John Dean.

SECOND AND THIRD CLASSES—HEAVY DRAFT AND BLOOD HORSES.
 T. G. Bacon, for the best Thorough bred Stallion, 4 years old and upwards, (bay horse, "Gamble," \$20
 T. G. Bacon, for the 2d best Stallion, 4 years old and upwards, (bay horse "Zinc," 10
 Geo. Elliott, Tennessee, for the best Thorough-bred Stallion, "Invincible," 3 years old, 10
 T. W. E. Beale, Richmond County, for best Thorough bred brood Mare, "Elizabeth McNairy," with colt by her side, 20
 To the same, for 2d best Thorough bred brood Mare, 10
 J. C. Hill, for best thorough bred Filly 2 years old, 5
 Geo. W. Elliott, Tennessee, for the best thorough bred Filly, "Res Rogan," 1 year old, 5
 There were no Morgan, Canadian or Imported Horses offered for inspection or entered.
 JUDGES.—Stuart Anderson; Wm. E. Dearing; R. M. Orme, Sen.; Wm. F. White.

FOURTH CLASS.—MORGAN, CANADIAN AND IMPORTED HORSES, no entries.

FIFTH CLASS.—MATCHED AND SINGLE HORSES.

Jas. A. Price, Clark co., for the best pair of Georgia raised match horses, (greys) \$25
 M. E. Heggie, Atlanta, for best single harness horse, Georgia raised, 15
 Jas. P. Mayne, Clark co. Ga., for the best saddle horse, Georgia raised, 15
 Wm. J. Eve, Richmond co. Ga., for the best draft horse, Georgia raised, 15
 Benj. Robinson, Kentucky, for the best pair of match horses, Southern raised, 15
 W. A. Mott, Milledgeville, for the best single harness horse, Southern raised, 10
 Geo. T. Allman, (known as "Little Red," for the best saddle horse, Southern raised, 10
 John H. Tripp, Richmond co. Ga., for the best pair of match horses, open to the world, 20
 JUDGES.—R. H. Ramsay, N. C. Trowbridge, Turner Clanton.

JACKS AND JENNETTES.

SOUTHERN RAISED.

Shaw & Curry, Edgefield, S. C., for the best Southern raised Jack, "Tippecanoe," \$20
 There were no Imported Jacks or Jennettes on exhibition.
 JUDGES.—Joseph L. Moultrie, N. B. Powell, A. S. Lenoir, Isaac Ramsay.

MULES.

GEORGIA RAISED.

A. Griffith, Oglethorpe co. Ga., for the best pair of Georgia raised Mules, \$20
 SOUTHERN RAISED.
 D. N. Heath, Danville, Ky., for the best pair of Southern raised Mules, \$15
 Orme & Alexander, Atlanta, for the 2d best pair of Southern raised Mules, 10
 JUDGES.—Joseph L. Moultrie, N. B. Powell, A. S. Lenoir, Isaac Ramsay.

POULTRY.

D. Redmond, Augusta, Ga., for the best pair of Brahma Pootra Fowls, \$5
 W. J. Mims, Richmond Co., for best pair of Shanghai Fowls, 5
 V. LaTaste, Augusta, Ga., for best pair of Cochon China Fowls, 5
 Col. A. G. Summer, Alston, S. C., for best pair of Southern raised Dorkings, 5
 Floyd Thomas, Augusta, Ga., for best pair of Grey Chittagongs, 5
 D. Redmond, Augusta, Ga., for best pair of Game Fowls, (Sumatra) 5
 D. Redmond, Augusta, for best pair of Bantams, (African) 5
 Mrs. Emily Ford, Augusta, Ga., best pair of Wild Turkeys, 5
 Dr. Jas. B. Davis, Columbia, S. C., for best pair of Wild Geese, 5
 Col. A. G. Summer, Alston, S. C., for best pair of Hong Kong Geese, 5

D. Redmond, Augusta, Ga., for best pair of Chinese Geese, \$5
 Wm. Schley, Richmond Co., Ga., for best pair of Musk Ducks, 8
 D. Redmond, Augusta, Ga., for the largest and best variety of barn-yard or domesticated Fowls, owned and exhibited by one person, (12 varieties) 25

PIGEONS.

Master Joseph S. Dawson, Chatham co., Ga., for the finest variety (40 pairs) of Fancy Pigeons, \$10

BEEES.

V. LaTaste, Augusta, Ga., for the best Bee Hive, \$10
 JUDGES.—Geo. Battey, Richard Johnson, T. F. Bulkeley.

PORK, BACON, AND BEEF.

Mrs. Lenoir, Tenn., for best Bacon Ham, \$5
 Mrs. Lenoir, " " " 1/2 doz. Bacon Hams 5
 Mrs. Lenoir, " " " Bacon Sides 5

JUDGE, J. M. WATTS, Chairman.

DAIRY AND HOUSEHOLD DEPARTMENT.

Mrs. W. A. Lenoir, Reane co., Tenn., for the best Fir-ken of Butter, \$10
 Mrs. E. W. Sproull, Cass co., for the best fresh Butter, 10
 Mrs. T. J. Lamar, Augusta, for best Jar of Leaf Lard, 5
 Mrs. McAlpin, Upson co., for the best Box Hard Soap, 5
 Mrs. P. C. Eve, Richmond co., for the best Soft Soap, 3
 Mrs. P. C. Eve, Richmond County, for the best Loaf Light Bread, 2
 Louisa Jackson, Athens, for the best Sponge Cake, 2
 Mrs. E. Harris, Columbia, County, for the best Ham, boiled with skin on, 2
 Mrs. A. J. Lane, Hancock County, for the best samples of Jellies, Preserves, Pickles, Catsups, Syrups, Cordials, fifty varieties, with directions for making, 2
 Mrs. T. J. Smith of Hancock, for the largest and best exhibition of Jellies, Syrups, Pickles, Cordials, &c. made and exhibited by one individual, 15
 Rev. R. Johnson, Atlanta, for the best jar of pickled Olives, 5
 Mrs. B. L., Tenn., for the best bushel of Dried Apples, 5
 Mrs. Flournoy, Augusta, for the best Dried Figs, 3
 Mrs. Means, Oxford, for the best Pickles, 3
 Mrs. Simri Rose, Macon, for the best and largest collection of domestic Wines made by one person, 15
 JUDGES.—Wm. Duncan, Thos. Stocks, Benjamin Stiles, J. S. Thomas, J. S. Linton, A. G. Lane, J. G. Ryals, J. L. Rowland.

BABY PREMIUMS.

[Fund contributed by several citizens of Augusta.]

Mrs. Jackson Turpin, for the handsomest and finest Baby over 2 and under 3 years of age, \$50
 Mrs. Gerald McLaughlin, for the handsomest and finest Baby over 1 and under 2 years of age, 25
 Mrs. D. B. Plumb, for the handsomest and finest Baby over 6 months and under 1 year, 10
 JUDGES.—Mrs. E. Bustin, Mrs. T. W. Miller, Dr. Wm. S. Jones.

SOUTHERN DOMESTIC MANUFACTURES.

Mrs. Clark, for the best pair of Cotton Socks, \$1
 Mrs. Rowland, of Cass, for the best pair of Woolen Socks, 1
 Mrs. J. L. Tarwater, of Penfield, for best wove Quilt or Coverlet, 5
 Mrs. J. Asher, of Murray, for 5 best Woolen Blankets, 10
 Mrs. Eberhart, of Madison co., best Figured Coverlet, 5
 Mrs. Rowland, for the best piece of Domestic Diaper, 5
 To the same, for best piece of Negro Cloth, 5
 To " " " Rag Carpet, 5
 Miss Eliza M. Sproull, for best Domestic Jeans, 5
 Mrs. Horton, for best samples of Plaid and Cotton Homespun, 5
 JUDGES.—Alex. Pope, sen., Dr. Wm. D. Conyers, Mrs. Wm. J. Eve, Mrs. Thos. W. Battey, Mrs. C. C. Taliaferro.

NEEDLE, SHELL AND FANCY WORK.

Mrs. J. W. Stokes, for the best Patch Work Quilt in Cotton, \$10
 Mrs. Wm. Greggs for best Silk Patch Work Quilt, 10
 Mrs. Rutherford, for best Marseilles Quilt, 10
 Mrs. Shyck for the best Raised Work Quilt, 10
 A Lady of Burke Co., for best Netted Purse, 1
 The same for best Thread Mats, 2
 Mrs. Wm. J. Eve for best pair of Cambric Undersleeves, 3
 Miss E. Rae for best specimen of Wax Work, in flowers, 5
 Miss E. K. Brett for best Wax Work, in fruit, 5
 Miss Mary A. W. Service, Zebulon, Pike Co., for best pair of Shell Knit Hose, 5

H. L. DEANE, Chairman.

FRENCH NEEDLEWORK, CROCHET, SILKS, AMERICAN NEEDLEWORK, &c.

- Miss Conner, Macon, best Collar and Chemisette in Crochet, \$5
 A Lady of Burke Co., for the best Tidy in Crochet, 8
 Mrs. E. L. Cain, Sparta, for the best French Needle-worked Handkerchief, 8
 Miss Thomas, Milledgeville, for best French Needle-worked Undersleeves, 8
 Mrs. Farrar, Rome, for the best Lady's Dress, worked in French Embroidery, 5
 Mrs. E. R. Sanford, Hancock, for best Knitted Counterpane, 10
 FRAMED TAPESTRY—RAISED WORSTED WORK, EMBROIDERY, KNITTING, NETTING, CROCHET, SILK, &c., &c.

RAISED WORK

- Mrs. Brady, Piano Cover, \$10
 Mrs. Ray, Table Cover, 5
 Mrs. J. W. Stovall, 2 Divans, 5
 Miss Kebris, 1 Ottoman Cover, 8
 Miss Julia Baudry, 2 Sofa Bags, 5
 The same, a Fire-Screen, "Prayer," 3
 Mrs. Charles Taylor, Lamp Mat, 2

EMBROIDERY IN SILK.

- Mrs. D'Antignac, for best Talma, \$5
 Mrs. Bowdre, for best Mantle, 5
 Mrs. Evans, for best Child's Dress, 8
 Mrs. Schley, for best Child's Sack, 8
 Mrs. J. W. Stovall, for best Child's Cloak, 5
 JUDGES.—Col. A. G. Sumner, Chairman, Mrs. M. E. Ware, Mrs. M. G. Clark, Mrs. A. A. Orme.
 Mrs. Cook, Athens, for the handsomest knitted child's socks, 1
 Mrs. Brosdever, Augusta, for best knitted Cradle Quilt, 1
 Miss Winn, for child's hat, made of down, 3
 Mrs. Clarke, Social Circle, for home knitted silk Hose, 2
 Miss Thomas, Milledgeville, for best specimen of American Needlework, a handkerchief, 8
 Miss Conner, Macon, for best Collar in American Needlework, 2
 Mrs. Wm. J. Eve, best American worked undersleeves, 3
 Mrs. Nafew, Richmond co., best child's dress, American work, 8
 Miss E. Smith, Tatnal co., for 10 yards of domestic silk, 5
 [She spun the warp from Sea Island Cotton, raised the Worms, wound the silk and wove the cloth; 18 years of age]

MANUFACTURING IN THE SOUTH.

- Athens Manufacturing Co., best bale of Osnaburgs, \$10
 Graniteville Manufacturing Co., best bale of Shirting, 10
 Macon Manufacturing Co., for best Bale of Sheetting, 10
 Athens Manufacturing Co., best Bale of Kerseys, 10
 The same, for best Bale of Stripes, 10
 Geo. Schley, for best Bale of Plaines, 10
 Athens Manufacturing Co., for best Bale of Bed Ticking, 5
 Geo. Walker, for best coil of Hemp Rope, 5
 Athens Manufacturing Co., for best Bale of Cotton Sacking, 5
 Hancock Manufacturing Co., for best Bale of Cotton Yarns, all No's., 10
 E. Denmead, for best barrel of Flour, 10
 Bath Paper Manufacturing Co., for best sample of Printing Paper, 10
 JUDGES.—Asbury Hall, W. D. Conyers, John Cunningham.

THE ORCHARD AND GARDEN.

FRUITS.

- Rev. Richard Johnson, Atlanta, for the best basket of Sweet Oranges, open culture, grown at the South, \$5
 Wm. H. Thurmond, Atlanta, for the best and largest variety of Apples for the table, 10
 To the same, for the best and largest variety of Southern Seedling Apples, labelled, 10
 To the same, for the best late Seedling Apple (the "Shock'ey") 5
 Rev. Henry L. Deane, Griffin, Ga., for the best and largest variety of Pears, 10
 Mrs. F. Turner, Sparta, for a lot of beautiful Quinces, 5

FRUIT TREES.

- Messrs. Sumner & Crammond, Alston, S. C., for the largest collection of Southern Seedling Apple Trees 34 in number, each variety labelled, \$20
 Wm. H. Thurmond, Atlanta, for the largest and best collection of Peach Trees, 85 in number, 20
 F. A. Mauge, Augusta, for the best and largest collection of Pear Trees, 84 in number, 20
 D. Redmond, Augusta, for the greatest variety and best collection of Strawberry Plants, (15 varieties) 5

- D. Redmond, for the best and greatest variety of Raspberry Plants, \$5
 D. Redmond, Augusta, for the largest collection of Osage Orange Plants, with the description of the method of planting and pruning the hedge, 20
 JUDGES.—Richard Johnson, V. La Taste, Jas. Camak.

FLORICULTURE.

- J. W. Bessman, Augusta, best collection of Green House plants, exhibited by one person, \$25
 F. A. Mauge, Augusta, for the finest and best collection of Roses, 201 varieties, 10

HORTICULTURE.

- Hugh Kennedy, Atlanta, for the largest variety of Garden Vegetables raised by one individual, for table use, \$25
 A. Pope, Washington, Ga., for the best and largest collection of Garden-seed, grown and exhibited by one person, 20
 A. Pope, Washington, Ga., for a new and valuable Garden Vegetable, (the Mangoe,) 5
 JUDGES.—George N. Fish, James G. Rials, Simiri Rose.

MECHANICAL PREMIUMS.

SOUTHERN FARMING IMPLEMENTS.

- Carmichael & Bean, for the best side hill Plow, \$10
 Carmichael & Bean for the best double Mould board Plow, 10
 Carmichael & Bean for the best Cast Mould board Plow for one horse, 10
 Carmichael & Bean for the best Cast Mould board Plow for two horses, 10
 F. M. Allen for the best wrought iron one horse Mould board Plow, 10
 F. M. Allen, Burke Co., for the best wrought iron two horses Mould board Plow, 10
 F. M. Allen, for the best Sweep, 5
 N. B. Moore, Augusta, for the best wrought iron tooth harrow, 5
 A. M. Fawset, Columbia Co., for the best Southern road wagon, 10
 A. M. Fawset, Columbia Co., for the best two horse wagon, 10
 F. M. Allen, Burke co., for the best Southern thresher, 10
 N. Nuckols, Columbus, Ga., for the best Straw Cutter, 5
 Randal & Mercer, Lee co., for the best seed planter, 5
 J. Rowe, Florida, for the best Corn and Cob Crusher, 5
 N. B. Moore, Augusta, for the best dump cart, 5
 Carmichael & Bean, for the largest and best collection of Agricultural and Horticultural Implements, 20
 F. M. Allen, Burke Co., for the most numerous and valuable collection of Plows—actually used by one farmer in the cultivation of his crop, all to be new, 25
 JUDGES.—T. P. Janes, Jonathan Miller, William Jones.

SOUTHERN MANUFACTURES IN WOOD AND IRON.

- W. H. Goodrich, Augusta, for the best Pannel Door, 5
 W. H. Goodrich, Augusta, for the best Window Blinds, 5
 W. H. Goodrich, Augusta, for the best Window Sash, 5
 E. H. Rogers, Augusta, for the best Rifle Gun, 10
 E. H. Rogers, Augusta, for the best Shot Gun, 10
 JUDGES.—John P. Eve, W. H. Goodrich, Aaron Roff.

SOUTHERN MANUFACTURES OF LEATHER.

- Hatch & Bigbie, Augusta, best and most useful Carriage Harness, \$10
 Hatch & Bigbie, Augusta, best and most useful Buggy Harness, 5
 Hatch & Bigbie, Augusta, best Saddle and Bridle, 5
 Isaac Ramsey, Columbia Co., best dozen Brogans, 10
 Marietta Manufacturing Company, largest and best collection of Southern Made Leather, 20
 Marietta Manufacturing Co., best Side Sole Leather, 2
 Marietta Manufacturing Company, best Side Bridle Leather, 2
 Marietta Manufacturing Company, best half dozen Calf Skins, 5
 Marietta Manufacturing Company, best dozen dressed Sheep Skins, 5
 Marietta Manufacturing Company, best dozen dressed Goat Skins, 5
 Sidney Smith, Marietta, best side Harness Leather, 2
 JUDGES.—R. McWhorter, J. R. Stanford, H. Newton.

CHEMICAL MANUFACTURES.

OILS, CEMENTS AND MINERALS.

- D. B. Plumb, Augusta, for the best case of pure Medicine, suitable for family use, \$10
 A. B. Sturges, Richmond Co., for four barrels Yellow Ochre, mixed for use, 10
 A. B. Sturges, Richmond Co., for best Bath Brick, 3
 Wm. Phillips, Augusta, Ga., collection Georgia Minerals, 10

Bridwell & McCut, Augusta, for the best French Barr
 Mill-Stone, Southern Manufacture, \$10
 J. M. Davidson, Woodville, Ga., for the best Oil Stones, 1
 Judges.—A. Means, W. Baer, L. D. Ford.

NOTE.—In consequence of the hasty and very imperfect manner in which some of the Committees discharged their duties, many of the reports are meagre, and not as perfect as could have been desired. Very many beautiful and useful articles in the various departments were exhibited, which are fully noticed in the reports but omitted in the premium list. These reports will be embodied in the Society's transactions, and published hereafter. An order has been let for the payment of such premiums as have been awarded but not delivered, at the store of Messrs. Clark & Co., Augusta.

JAMES CAMAK,
 Sec. S. C. A. S.

FARM MACHINERY.—The Journal of the New York State Agricultural Society states, that Roswell L. Colt, of Patterson, employs on his farm a steam engine 13 horse power, which performs the operation of threshing, cutting stalks, straw and hay—steaming food, sawing firewood, boards, timber, &c. The steaming apparatus for preparing food is very complete. The out-buildings are of the most complete kind—the arrangements for horses, cows, pigs, poultry, &c., are excellent—the stables are so constructed as to save all the manure, both liquid and solid.

TERRELL PROFESSORSHIP OF AGRICULTURE.

UNIVERSITY OF GEORGIA, }
 ATHENS, Sept., 1854. }

At the recent session of the Board of Trustees of the University of Georgia, the following communication was received from Dr. WILLIAM TERRELL, of Hancock county:

SPARTA, July 27, 1854.

To the Honorable,

The Trustees of the University of Georgia;

GENTLEMEN:—From such observations as I have had an opportunity to make, on the condition of the people in different parts of the world, I am quite satisfied that there are none who are so abundantly supplied with all the necessities and comforts of life, as our own; and that there is no form of government so suitable to the intellectual development of a people, or the resources of a country, as that of the United States.

To give perpetuity to the compact of these confederated States, the principles of which have thrown so much light on the social and political relations of man, and aided so much in the advancement of civilization, and the means of individual and national prosperity, is surely the duty of every patriot. Education is doing much for this great object in every department of knowledge, except in agriculture; and in this, the most important of all, the United States are far behind most of the States of Europe; and the Southern, with the advantage of soil and climate, much more so than the Eastern and Northern. The best form of Government for a country where a system of agriculture prevails that is constantly tending to impoverish the soil, cannot long sustain a thrifty population, or be able to defend itself. To avoid such a calamity, which there is reason to fear will be ours at no very distant day, the people of the Southern States must find the means of preserving their lands from destruction by bad tillage, which is so strikingly observable in every part of the country.

To aid in this great enterprise, if you will allow me to call it such, I propose to your honorable body to give to Franklin College, Bonds of the State to the amount of twenty thousand dollars, the annual interest of which shall be applied permanently as compensation for a Professor, whose duty it shall be to deliver in the College, a course of Lectures during its terms, on "Agriculture as a Science: the practice and improvement of different people;

on Chemistry and Geology, so far as they may be useful in Agriculture; on Manures, Analysis of Soils and on Domestic Economy, particularly referring to the Southern States;" the Lectures to be free.

If this proposition is acceptable to you, I shall ask the privilege of recommending to your consideration for the appointment of the first Professor, Dr. DANIEL LEE, who has spent twenty years of his life in the study and practice of Agriculture, and who will bring to its duties all his skill and a zeal that ought to ensure success.

With considerations of the highest respect,

I am your obedient servant,

WM. TERRELL.

It is due to the history of Agriculture as a Science in this country, that we record the fact that no other person in this great Republic has given, for immediate use, to increase and diffuse rural knowledge, more than one-fourth the sum donated by the patriotic and distinguished founder of the first Professorship of Agriculture in the Southern States.—A similar Professorship was established a few years since in Yale College, on the gift of \$5,000 by Mr. NORRIS, whose son was appointed to fill the new chair thus created. No paternal or family tie has in any way been associated with the munificence of Dr. TERRELL. View the transaction in whatever light we may, nothing is discovered but the wish and the effort of a noble mind to arrest that tendency to impoverish the soil which forms so striking a feature of American Agriculture.

The task assigned is one of no ordinary character; and however incompetent to its execution the person invited to labor may feel himself to be, yet it is his purpose to do all that in him lies to make this humble beginning in the way of Agricultural education the starting point of a higher and better system of study and practice in rural affairs. How Agricultural Sciences can be best taught and studied, are points not at all settled in the public mind; and therefore a few suggestions on these topics may not be out of place in this connection.

If we are not mistaken in the view we have taken of Agricultural education, the TERRELL Professorship needs both a museum and a library of strictly professional character for the use of those who may wish to study rural arts and sciences in the University of Georgia. Such of our readers as have visited the Agricultural Museum and Library of the New York State Agricultural Society in Albany, must have been satisfied of the great advantages which they afford to all who wish to extend their knowledge of Agriculture as an honorable profession, in that place. A museum is even more important than a library, for each pupil may, without great expense, provide himself with the most useful books needed; but he cannot have all the specimens of grain, fruit, vegetables, cotton, grass, and other plants, the investigation and production of which can never cease to be of general interest. To understand all that is knowable of crops, soils, domestic animals, and farm economy, one needs to study these various and often complex matters, with the subjects before him. He must test them with the utmost care and circumspection in every desirable way, that he may wisely separate truth from error. Without a Museum, skilfully collected and arranged, it will be impossible to illustrate any popular lectures in a way to render them alike instructive and interesting to the youthful mind. Museums have done more to create a taste for the natural sciences than perhaps all other appliances combined. Seeing is performed with small effort, and often with immediate and lasting pleasure. Talking, with no visible demonstrations, is not the most improved plan of teaching science.

Some time must elapse before a new enterprise of this kind can be got into a good working condition; and after due consultation with the Prudential Committee of the College, it was thought best not to commence the first

course of lectures before the first of March and continue them three months. Another course of the same length is to be given in Autumn. To grow specimen agricultural plants for a museum, seeds of all kinds adapted to the purpose are wanted for planting and cultivation. It is impossible to say how far ways and means may be provided to prosecute experiments in the improvement of land, of staple crops and of domestic animals. That there is abundant room for improvement can not be reasonably doubted; but how much can be done in the practical part of farming, will depend mainly on the good opinion of the public, and the action of the Legislature. Possibly some one or more may give the funds required to purchase and stock a farm for experimental purposes. A living educational germ has been called into existence; and every friend of Southern agriculture will rejoice to see it become at once fruitful, and multiply its blessings till they shall reach the whole community. By faithfully inculcating sound principles, first a partial, and then a general reform in the treatment of the soil will be effected. Reformatory make very unequal progress, being influenced by a thousand adventitious circumstances. Where millions are concerned, as they are in tillage and husbandry, many thousands must co-operate in the work.

They alone can create that enlightened and salutary public opinion which both demands and enforces agricultural progress and the steady improvement of mankind. Dr. TERRELL designates "*the improvement of different people*" as one department of the instruction to be dispensed from the Chair that bears his imperishable name. "*The improvement of the people*" is indeed a grand desideratum, and a subject that pre-eminently deserves the profoundest thoughts of every philanthropic mind. By improving a people, we improve alike their industry, their professional skill, and their moral conduct. That the earnest study of agricultural phenomena, and of the laws of nature which in a great degree govern the same, tends to improve society, will hardly be questioned by any educated person. This field for the wise and successful cultivation of man himself is perfectly inexhaustible. The capabilities of different combinations of soils, of vegetable and animal vitality, of human thought and human action, wielding any desirable amount of capital, are all unknown powers whose development will continue to advance and expand for indefinite ages.

The educational system of past ages, which has come down to us, needs enlargement to meet all the wants of the last half of the nineteenth century. The best interests of Georgia demand for the use of her young men a University of the most improved and comprehensive character. The people who are to rejuvenate every old field in this large commonwealth, require educational advantages commensurate with the objects to be attained. From some central point the light of Science and the light of Practice should radiate over the whole State. L.

SMALL HOGS FOR THE SOUTH.

MESSRS. EDITORS—I see a communication in the *Cultivator*, from Jackson, Tennessee, in which the writer makes some enquiry with regard to the best breed of Hogs for the South, &c.; and as I like to have the opinion of my brother farmers upon all matters pertaining to our occupation, I will give your correspondent my views upon the hog and the breed that I think best adapted to this portion of the South (32 degrees 30 minutes). I am fully satisfied from over 20 years experience and close observation that a small hog is the best for the farmer, for several reasons:

1st. He is easier raised and fattened (that is, it takes less feed to do it;) he will fatten kindly at any age you may wish; while my experience with the larger breeds is, they will not fatten well when young, say a year old.

And I am fully satisfied that I can raise and fatten more pork from a given quantity of feed from the small than the large breeds.

2nd. The meat is sweeter and easier saved in our warm climate. What I would be understood to mean by a small hog is one with small bone, that will weigh, at from one to two years old, from 150 to 250 lbs. And such breeds can be found in nearly every county and parish in the Southern States. Whether they are natives or crosses from improved breeds I am not able to say; neither would I care if I was hunting a breed to raise from. While, Messrs. Editors, I am aware there is a vast difference between the different breeds of hogs, there is still a greater difference to be produced by treatment. And I have no doubt your correspondent might profit by your valuable hint, "that much depends upon the treatment."

I am much inclined to the opinion that each section of country has, to some extent, its peculiar stock; that is, the climate and feed has its influence upon stock. For instance, the cattle in the lower counties of Georgia are not so large as they are in Western Texas, although they may have as much of the wire grass, peculiar to that section of the country, as they can consume; but it does not contain as much nutritious matter, and, hence, stock raised upon it will not grow as large as that raised upon the rich prairies of Texas, and from that circumstance I infer that stock raised upon grain grown on poor land will not grow as large, however well fed, as if the grain was raised upon rich land. If I am correct in this opinion, we need not expect our stock to grow as large as it does on the rich lands of the Northwestern States. I would like to have your opinion upon this subject. C. L.

Minden, La., 1854.

REASONS WHY EVERY FARMER SHOULD PURSUE HIS BUSINESS AS A SCIENCE.

1. Because Agriculture is a Science.

Every man who has pursued, even moderately, the Science of Vegetable Physiology, understands perfectly that almost all the modern improvements in fruit culture have been made, because men have devoted themselves to the study of the great facts in regard to the growth of plants and trees; the circumstances in which they flourish most; the chemical analysis of the elements which compose them, and the modifications of which they are susceptible, by proper care and cultivation. Just so in respect of the various soils which the farmer has to manage. If he knows the chemical elements which compose them, and those which compose the various products he wishes to grow, he will be able to adapt his crops to his soil, and his manures to both, in a way which will prove to all that Agriculture has its laws; and that acting in conformity with them, is the basis of the only true art in farming. For example: wheat contains gluten and starch in such proportions that they compose together seventy-five per centum of its entire substance. Now, if the farmer undertakes to raise wheat on a soil which does not contain the elements of starch and gluten, he will fail. His soil will not give that which it does not possess. His lost labor and wasted capital will be the penalty of his ignorance of the scientific condition of permanent success. On the other hand, the knowledge of these conditions, and the application of them in the exercise of caution, common sense and reasonable skill, will bring an abundant reward.

Every department of the great business of farming is full of the illustrations of the point that we are now on; namely, that Agriculture is a Science, and that its laws, when known and applied, will secure results as certain as any that attend the application of the laws of Hydraulics in Machinery, or those of light and chemistry in the beautiful productions of the Daguerrean art.

2. *Because Agriculture pursued as a Science, with the needful caution and perseverance, is a source of the highest and most constant pleasure.*

No thinking, active mind is content with mere processes of muscular effort. To such a mind, the tread-mill of a farmer's work, pursued from generation to generation, in the same unvarying monotony, is tiresome enough. The toil becomes doubly toilsome, because it is enlivened by no living and inquiring thought. And the farmer himself becomes almost as stupid as the cattle he feeds, except politics, or literature, or religion, shed at intervals, and from afar, a beam of cheerful light on his mind. But let every process have its well digested theory; let every piece of work, while done in its time, and most efficiently performed, be an experiment which compares different modes of manuring or cultivation; let every change be made on sober thought, and with a full knowledge of the objects to be gained, and of the best and cheapest means of gaining them; in short, let the life of a true Science send its healthy pulsations through the whole system of a farmer's work, and he feels a joy "unfelt before," in every work to which he sets his hand. His farm becomes his laboratory. The pleasure felt by the Chemist or Artist, as he communicates these discoveries which bring the ends of the earth together, and revolutionize the social condition of nations, is shared by the careful and laborious student in Scientific Agriculture. For he is applying similar principles, and his labors tend to a similar result. Every crop is a study to him, for it has its own laws to be studied. Every season has its charm for him, for its changes and chances must be carefully watched. He must make suns, showers, and snows, and frost, and fire, all to minister to his interests and work out his ends. And in doing all this—and all this he will do, if he works with open eye and careful hand—will he not find a pleasure so constant as to enliven his heaviest toil, and so varied as to strip of their charms the false attractions of city life, and so purely intellectual and refined, as to place him in dignity and aim side by side with the great brotherhood of thinking men, whose hands have been busy, but whose brains have been more busy still; and who have done most for the wealth and comfort of the race, because they have done most for its improvement in all solid and enduring Science.

3. *Because it would be greatly to the pecuniary advantage of the farmer to pursue his vocation as a Science.*

If he pursues his work simply because he has done so before, or because his father or his neighbors have done so, he shuts out all improvement, of course. If he makes changes blindly, he is much more likely to lose than to gain. Besides, if he makes experiments at random, some of his neighbors—and perhaps he himself—will set down his failures to the account of Scientific farming; and be the more confirmed in their old ways, because of his blindness and blundering in a single case. But if he studies, during his leisure, the results of former experiments in the department he is enquiring about; if he converses with intelligent men, who have been successful in the same branch, and who understand and will explain to him the principles and processes which they have adopted, he will be safe in following their example. And thus proceeding—with thought ever active, and making due account of all differences between his experiment and theirs, he will very probably be far more successful than in any other way. A little example of the disadvantages of ignorance, on a single point, will illustrate this matter. Within sight of the window by whose light the present article is written, is a strawberry bed. Its owner prepared the ground carefully, enriched it well, and planted it with plants of a choice kind, in the very best manner. He has hoed, and manured, and mulched, and watered now for two full years. The plants have grown, and

spread, and flourished greatly. Every spring the ground has been white with flowers; but no fruit has been matured. And the owner has just discovered that the kind he planted was a pistillate kind. Of course it could never ripen its fruit. He has lost two year's fruit from his ignorance of this single fact. His neighbor, who lives but a little distance off, has had abundant supplies, from a bed but little larger, and no better cultivated, because he planted one row of Early Scarlets between every two or three rows of his pistillate kinds. This is a single case. Millions more might be gathered on a large scale as well as on a small one, all over our land. But we must stop now. We close with a single remark: *The strictest Science is the mother of the truest Art.*—Ohio Farmer.

SPAYING COWS.

In "old times"—if you know when that was—the practice of spaying female animals of the farm, such as cows, heifers, sows, &c., was very common, and was thought to be profitable. The custom, however, went out of practice gradually, until at last no one could be found acquainted with the mode of performing the operation.

This subject has been recently called to the notice of farmers, by a writer over the signature of "A." in the *Boston Cultivator*. This writer recommends the practice for various reasons, but brings forward no cases to prove the positions taken by him.

Since the appearance of "A.'s" communication, Mr. Elijah Fletcher, of Tyngsboro', communicates some interesting facts, as the results of spaying three cows. We abridge from his account the following:

First cow was 11 years old—was spayed 22d day of May, 1851. After being fully healed, her milk increased in quantity and quality; continues to give on an average the year through, 7 quarts of milk per day—in winter kept on hay alone; turned out to fatten this summer on account of age.

Second cow, six years old, gave 8 quarts of milk per day; spayed June 11th. A tumor being found near one of the ovaries, it was not removed, and she consequently manifests the sensual passions; she continues to give the usual quantity of milk, but being predisposed to fatten has been turned out to prepare for that purpose.

Third cow was 5 years old, gave ten quarts of milk per day; Spayed June 11th; continues to average this quantity ever since; thinks that 8 quarts will make more butter than 12 quarts of any other that he owns, that are not spayed. Winter before last she made a pound of butter per day, fed on hay only.

All these cows carry more flesh since being spayed than before. Mr. Fletcher comes to the following conclusion:

"I am thus far perfectly satisfied with the experiment, and recommend the operation, especially to those persons keeping one cow, as they will have a continuance of milk all the year round, and in quality for butter, at least 25 per cent. better than that from cows not spayed."

DEPTH AND MELLOWNESS OF SOIL.—Depth and mellowness of soil may be considered the principal characteristics of successful gardening. In our school-boy days, we have all read of the dying husbandman, who told his son never to part with the vineyard, as there was a valuable treasure lying within a few inches of the surface. This young man, in the expectation of finding a bag of money, carefully turned over the soil, but found nothing. In the subsequent harvest, however, he was astonished at the extraordinary luxuriance of his crops, and then understood, for the first time, the enigmatical meaning of his father's words.—*Boston Cult.*

THE WAY TO TRANSPORT LOGS.

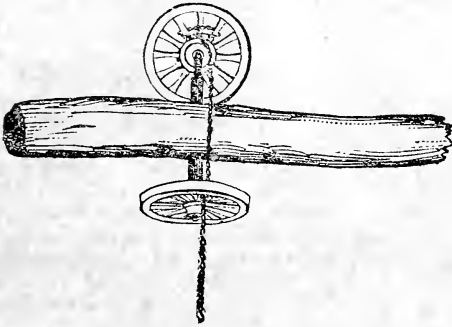
ONE of our correspondents, Mr. W. S. Booth, of Litchfield co., Conn., has favored us with the accompanying sketches, illustrating, according to his experience, the best manner of drawing timber from remote and difficult localities. In nearly all the easily accessible localities on the Atlantic border, the forests have been cut down, and now the supply must be taken from those points where great difficulties in the way of transportation have to be overcome, such as mountain-tops, precipices and ravines. The method at present in general vogue, is to slide the logs

Fig. 1.



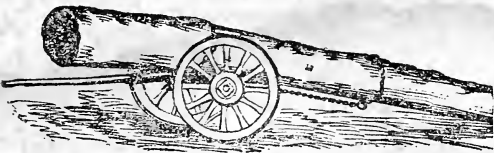
down by hand-spike for one or two hundred yards, or pull them by team and log-chain. But there is great danger, both to team and driver, by the latter mode, as the logs acquire increasing velocity in proportion to the steepness of the descent. Mr. Booth's plan is to provide a simple pole of any flexible wood, say five inches diameter and ten feet long, and attach it firmly as a tongue to the log, in the manner seen in Fig. 1. The tongue is kept in place by means of a notch in the log and a couple of pins, between which the chain passes, as shown. The fixtures for hitching on the team to the pole are made in the usual manner.

Fig. 2.



In order to load your cart, place your axle on a gentle slope, at right angles to, and about five feet from the third part of the length of the log; remove the nearest wheel by pulling out the fastening, and let it lie in a horizontal position, with the end of the axle resting directly over the middle of the hub of the wheel, in the manner shown in fig. 2. Then by means of a plank placed on the axle, and extending over the wheel to the under side of the log, roll on the log with a cant-hook, or team and chain. Finally, draw on the wheel with your team, which may be done by fastening a chain around and over the spokes, close to the hub of the wheel, as shown in fig. 2.

Fig. 3.



The log should rest on the axle at onethird distance from the end. In drawing timber thus trailing on the ground, the greatest difficulty is that the log does not follow the direct track of the wheels, but inclines to one side or the other of the road, thus lying obliquely along the

road. To remedy this we use two chains, the one forming a noose under the log forward, and as close to the axle as it can be fastened; the other forming a noose some eight or ten feet behind, and connecting the two together in the manner shown in fig. 3. This plan will effectually prevent the oblique trailing of the log. It will also answer where two logs are fastened at a time.—*People's Journal*.

PATENT OFFICE CIRCULAR.

The following Circular has been issued from the Patent Office. As the readiest way of meeting its object, we copy it entire, with the expectation that there are those in all sections where the *Cultivator* circulates who will answer its questions:

WASHINGTON, July 20, 1854.

Sir:—The collection of Statistics on Agriculture being one of the duties of this office, your aid is respectfully solicited. For the sake of convenience, questions intended for the various individuals in all portions of the country are hereunto annexed, which are to serve rather as hints or suggestions, than to be literally followed in the replies.

As we seek no information that is not strictly reliable, it is hoped that your answers will be limited to those matters with which you are connected, even although they may relate only to a single subject. If, therefore, you can communicate explicit and undoubted information on any of the topics under investigation, you will confer a favor by so doing. It is not expected that the reply of any individual will relate to all the subjects embraced in this Circular, but only to those with which he is practically familiar.

As another object to be attained by this office is the introduction and dissemination of new or improved Agricultural products, we shall take pleasure in receiving and distributing any packages or parcels which may be committed to our charge whether they consist of the seeds of cultivated plants, either of native or foreign growth, or those of natural grasses, fruits, wild flowers, forest trees, or of the cuttings or sets of anything which may be deemed worthy of cultivation.

With our efforts in this respect, it is hoped that the interest you feel in agricultural subjects will induce you to co-operate as far as you may find it convenient and agreeable. Accurate statistics are desired as far as it is practicable to obtain them; but all that we can reasonably expect, in most cases, is the nearest approach to the truth to which your experience and judgment will lead you.

The subjoined inquiries are mainly intended to direct your attention to certain points on which information is desired. It is hoped, therefore, that the mention of these will not exclude any other matters of general interest that may suggest themselves. Your reply to those you may feel willing to answer is solicited at as early a date as practicable—not later, at all events, than the first day of December next.

Very respectfully, your obedient servant,
CHARLES MASON, *Commissioner*.

Domestic Animals.

What classes of animals can be raised to best advantage in your section? Cost of rearing, and value at various ages? Cost of transporting each to the Atlantic or Gulf markets, also, by canal, railroad, or on foot? What breeds are the most serviceable for labor, milk, flesh or wool? Have you any imported or blood animals in your vicinity? If so, state the number, breed, history and pedigree, if known, and the effects of crossing, if any, on your common stock.

Animal Products.

What is the cost of production and market value in your vicinity, of wool, silk, wax, honey, cochineal, butter, cheese, eggs, beef, mutton, pork, hams, lard, oil, hides, tallow, pelts, &c.? What is the cost of transportation by canal, railroad, or otherwise, to the Atlantic or Gulf markets?

Manures.

What manures are most in use, and which the most valuable for special crops? If guano, bone-dust, poudrette, super-phosphate, lime, gypsum, charcoal, ashes, fish, muck or any other valuable fertilizer are employed in your vicinity, state the cost, modes of application, and their effects upon the respective crops to which they have been applied. The result of any accurate experiments would be desirable, especially as connected with any of our great staples—cotton, tobacco, hemp, flax, wheat, oats, rye, barley, rice, potatoes or Indian corn.

Agricultural Products.

What crops can be cultivated to best advantage in your vicinity? The best modes of cultivation? The maximum and average yield of each, and the smallest yield that pays expenses? Have you any established rotation of crops? What plants are cultivated for the purpose of plowing under as a manure? Have you any remedies against the diseases and insects which infest your crops? What are your best modes of harvesting, storing and preparation for market? What is the cost of production and market value, in your vicinity, of the various kinds of grains, roots, hay and fodder, cotton, hemp, flax, hops, sugar, tobacco, &c.? What is the cost of transporting each product by canal, railroad, or otherwise, to the Atlantic or Gulf markets?

Special interest is felt at the present time in those plants which are employed in the manufacture of cordage, clothing, &c.—such as cotton, hemp and flax. Are any of these crops profitably cultivated with you? If so have you any improved varieties, new modes for market?

Market and Kitchen Gardening.

Please give the names of the best varieties of garden vegetables, the usual times of sowing, periods of maturity, and their market values. What vegetables are brought into your vicinity from the North, South, East, West, or from beyond sea; at what season, and at what prices?

Fruits, Wines, &c.

What varieties of summer, fall, and winter fruits are cultivated with the best success in your section? What kinds are attacked by the blight, mildew, or insects particularly injurious to their growth? If any, what remedies have you against their attacks? Have you any improved modes of cultivating fruit, harvesting and preparing it for market? What is the cost of transporting those kinds not perishable, to the Atlantic and Gulf markets, by canal, railroad, or otherwise? Is the grape cultivated with you for table use, or with the object of making wine? If for either, can you communicate any information relative to its history, cultivation, preservation, or the manufacture, cost and market value of American wine? What fruits are sold in your vicinity grown at the North, South, East or West; at what seasons and at what prices?

NOTE.—Please to treat of each subject under a distinct head, after the manner of the arrangement of last year's Report; and, if convenient, leave one side of your manuscript blank.

FARMING IN TEXAS—IRRIGATION, &c.

MESSRS. EDITORS—I hoped to have been able to give you some interesting accounts of my agricultural and horticultural operations in Texas, but, owing to the lateness of the season and the unfavorable circumstances

under which I started, I have been so unsuccessful that I have felt no inclination to communicate. My fruit trees and shrubbery (which were in great variety) that I received from the North as well as from the West did not arrive until April, and that in a perished condition, and, of course, all died, though every means was used for restoration. My Peach, Apple and Osage Orange seed arrived at the same time, none of which, as yet, have vegetated, although I cracked some of the peach stones and steeped the other seeds in luke warm water. As for my flower seeds I never sowed them at all, for experience had taught me that it was useless to sow the like at that season, in this climate. I took advantage of the margin of a small stream and sowed Rhubarb, Tobacco, and Celery seed and found, for about two feet from its brink, they all vegetated and grew beautifully, while over that distance none grew at all. And again, about the last of July I sowed Cabbage, Brocoli, Celery and other small seeds, and experienced the same result, although that sowed away from the stream I shaded with green boughs and watered freely, which convinces me that nothing but irrigation can be depended on to produce humidity enough for gardening purposes in this climate, the evaporation is so great. Now to the question I wish to ask you: at the bottom of my garden I have a never failing stream of water with a fall of four feet in ten yards; in fifty yards I could get six feet. In this creek I am anxious to put a hydraulic ram by which I can raise the water 15 or 20 feet to answer the purposes of irrigation, but of the nature and the manner of the working of these rams I know very little, neither am I acquainted with any one that does know anything about them; therefore, if you can give me any information respecting them I shall receive it as a favor, or if you can send me any work on the subject I will pay the cost by return of mail.

Our crops of Irish potatoes were never so good as this year. Corn is fine. Wheat is excellent; we have been using Texas made flour for some time; it is better than imported. I saw wheat sown in March of as good quality as ever I saw in any country. Oats in quality and quantity, I never want better; and as for Millet, the quantity raised per acre is incredible; it has superceded prairie hay altogether. Yours respectfully, W. D.

REMARK.—In the use of the Hydraulic Ram, we believe one foot fall will give you ten feet rise. The Rams, of different capacities and prices, may be had at most of our large hardware stores, with pamphlets or circulars describing the method of fitting up and arranging.—Eds.

A STEAM PLOW.—Among the inventions of the day is a plow to go by steam. Its construction is simple; a velocipede on wheels sixteen feet high and eight feet apart, with a governing wheel eight feet high. It may be converted into a steam land locomotive, and on a smooth, firm road, travel at the rate of twenty-five miles an hour. It can be used for various purposes. It is the invention of Mr. Henry Cowing, of Louisiana.

It is estimated that 100 pounds white zinc paint will cover, when applied in three coats on new work, as much surface as 166 2/3 pounds pure white lead. The white zincs, even when exposed to coal, gas, bilge water, and sulphurous vapors, retain their original brilliancy and whiteness. Apartments just painted with zinc paint, may be slept in with impunity; whereas, according to the best authority, rooms should not be used for sleeping apartments for two or three months after being painted with lead.

Nothing sets so wide a mark between a vulgar and a noble soul, as the respect and reverential love paid to woman kind.

EATING MEAT.

THE Americans are the greatest eaters of animal food. The pork consumed in the United States is three times the quantity consumed by the same number in Europe, if statistical accounts are to be believed. Animal food is very generally set on the table three times a day in the western country. An Irishman writing home and extolling the luxury of his condition in the new world, added, by way of a clincher, that he commonly took meat twice a day; upon which his employer asked him why he did not state the whole truth. He replied, that if he had said three times, all his friends would have believed that he lied. This was going a little too far for common credulity. But after all, the Americans are a spare, hungry-looking people, not appearing as if well nourished. The inhabitants of northern Europe and Asia are physically and morally weak, though living mostly on fish and flesh. The Scotch and Irish, who eat but little meat, are strong, capable of great labor and fatigue, and more able-bodied men than the English, who are more addicted to animal food. The strongest men in the world, of whom we have any account, are the porters of Smyrna, who never taste flesh. The South Sea Islanders are very powerful men, upon a diet mostly of vegetables and fruit. It is said that the soldiers of Greece and Rome seldom tasted meat, though qualified by physical courage and endurance for the conquest of the world. The suspicion is quite strong that Jonathan would gain flesh and improve his general appearance, by the substitution of bread and vegetables as a part of his diet for animal food.

POULTRY CHOLERA—"KITTLEWELL'S RENOVATOR," &c.

AN esteemed friend, at Beaufort, S. C., writes us as follows:

The "Cholera," has carried off all my ducks and many of my turkeys and fowls; but lately a friend trying the spirits of turpentine for "gapes," I was induced to try it for "cholera" also, and with unexpected success. I have had it also tried upon my plantation, and it has proved decidedly the best remedy that I have tested as yet. The oxyde of iron has failed as a preventive, and the feather in the neck, and doses of pepper and whiskey as a cure, as far as I have tried them.

I tried this season "Kittlewell's Renovator, or Agricultural Salt," largely, upon long-stapled cotton, and the results were very promising, until the tide during the late gale overflowed all my cotton fields, and cut off two-thirds or three-fourths of my crop. This manure has, in this neighborhood, proved much better as well as cheaper for cotton than Peruvian Guano, and the consumption of it, though already large, is likely to increase. It gives good growth of weed, with proportionate fruitfulness, while Guano fails in the latter respect. Guano I have tried upon corn and cow-peas, and with very satisfactory results. It was strewed, at the rate of one bag per acre, in the bottom of a furrow turned out of the bottom of the row with a two mule plow, and then two similar furrows thrown back over it, for corn. The peas had four furrows and a rough bed, as the land was very weedy.

Yours respectfully,

R. C.

REMARK.—We have tried many remedies for the "Poultry Cholera," but as yet do not claim to have discovered a *specific*. Stimulants, like common table mustard, mixed with water, (dose, a teaspoonful) and "Radway's Ready Relief" (half a teaspoonful) are very useful, and constantly repeated, will often cure, if administered in time.—Eds.

THE LARGEST HOG.—Martin Roberts, who resides on the river some six miles below Madison, in Kentucky, has a hog that weighs 1,900 pounds, which he has sold for \$200.

THE BANNER MILK COW.

"WILLOWAY FARM," West of
NEW PETERSBURG, O., Nov. 16, 1854. }

THOS. BROWN, Esq., EDITOR O. FARMER:—At your request, and in the fulfillment of promises made other agricultural friends of some half dozen States, I present you for publication, the following statement of the Banner Milk Cow of the Union! honored with first premiums at our State and National Fairs in October last.

"Madame Giantess" is a thorough bred cow, of the Paton and Short Horn cross, an orange red and white, variegated with clusters of beautiful spots on the back, resembling the English grape. Her horns are symmetrically fine, with a slight inclination upward. Age, 7 years; weight in the last 15 months, owing to condition, from 1,600 to 2,000 pounds!

MILK AND BUTTER RECORD.

In June, 1854, in ten successive days, Giantess gave 768 pounds of milk, (her calf then 4 1-2 months old) 26 pounds, making a pound of butter. In May she gave on an average, being grain fed and left to grass, 88 pounds of milk per day. On one occasion she produced 26 pounds of milk in six hours!

GROSS BEEF RECORD.

Giantess has raised two calves this year, her own, a bull calf, and an orphan, a heifer, he being calved January 30, 1854, she March 16, 1854. The weight of the calves on the 1st of October was 1,425 pounds, his weight 925 lbs. The calves, until the 1st of September, had not been fed anything in the shape or of the nature of grain; reared entirely upon milk produced by Giantess, with the grass found in their lot. I think I might challenge the world to a comparison!

TREATMENT OF COW.

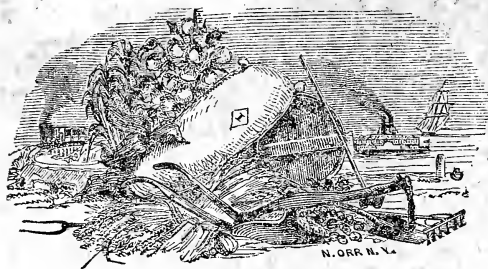
Since I purchased her in August, 1853, Giantess has had plenty of grain feed when necessary, and in grass season, a variety of the best grasses, with the liberty of ranging over some three or four fields of about 50 acres, at all seasons. I use no hay in winter; fodder, with plenty of corn in it, is Madam's principal diet during the winter season.

If the above facts are worth a place in your excellent paper, you are at liberty to publish them.

J. W. BROCK.

We clip the above account of the "Banner Cow" from the *Ohio Farmer* of the 9th of December last, mainly to show how little is known at this time of the milking qualities of cows of the very highest pretensions. Notwithstanding "Madame Giantess" took the first premiums at the late State and National Cattle Shows in Ohio as the best milker, we suspect that she is little better than a mammoth humbug. Mr. Brock deserves no premium nor credit for his "Giant" cow unless he can show that 100 pounds of grass, corn, fodder and corn meal yield in her system more milk, cheese and sugar than the same quantity of food will yield in the system of a good common cow. This important point, he and the societies to which he alludes, have entirely overlooked. They have shown nothing but the barren fact that a big cow, having all the grain and other feed she can eat, gives some more milk than a poorly kept little cow will give!

VALUE OF AGRICULTURAL PAPERS.—A subscriber in Connecticut, writing the *Albany Cultivator*, says.—"I am much indebted to the *Cultivator* for remedies which have saved me two cows, thereby saving enough to pay for it a life-time, besides the great amount of knowledge obtained from it on all other subjects."



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 1..... JANUARY, 1855.

A HAPPY NEW YEAR!

AT the opening of 1855, and the beginning of our *Thirteenth Volume*, we most cordially tender to all our subscribers and friends, old and new, the compliments of the season; with the hope that our united efforts during the present year may do much to advance the cause of Southern Agriculture and rural improvement.

EXCHANGE PAPERS,

ESPECIALLY those of the South, are respectfully requested to notice the beginning of our new volume, our terms of subscription, the aims and objects of our journal, &c.

THE DECEMBER (1854) AGRICULTURAL FAIR.

IN accordance with previous announcement, the Ninth Annual Fair of the "*Southern Central Agricultural Society*" was held near this city, during the week, commencing on Monday, 4th of December, 1854.

The Fair had been twice postponed—a fatal pestilence had lately raged in our own and neighboring cities, bearing on its wings death and desolation, and spreading fear and panic far and wide—the crops throughout the country had yielded but a partial and meagre harvest—the year was far advanced into the "sere and yellow" of winter, and the present unexampled stringency of the money market was just beginning to press heavily on all classes; and yet, in the face of all these discouragements and drawbacks, it cannot be denied that the exhibition, upon the whole, was highly creditable to the taste, skill, industry and enterprise of Georgia and her sister States—many of which deserve great praise for their liberal contributions, and the large delegations of their worthy sons and lovely daughters, who honored us with their presence.

The number of articles on exhibition was not as great as on some former occasions, but we did not notice any marked difference even of quantity in any of the more important departments. As regards the quality of most of the contributions, we are pleased to state that the progressive improvement of our Fairs during the past few years was strikingly observable in the greater portion of the animals and articles shown; and that the spirit and interest generally felt among the members of the Society, augurs much for its permanent advancement and success.

The Premium List (which we publish elsewhere) may be taken as a fair indication of the opinions of the Judges on the merit of the articles submitted to their inspection; but as we do not feel disposed either to accept or reject their awards *in toto*, we will give such a brief summary of the exhibition as we were able to gather amid the bustle and excitement incident to the occasion; aiming

to avoid all invidiousness or partiality toward exhibitors or articles:

FIELD CROPS AND SAMPLES OF FIELD CROPS.—In this department there were about 70 entries—the slight falling off in quantity from last year being clearly traceable to the very unfavorable character of the late planting season. Fine samples were shown and good yields reported of the different crops mentioned in the premium list. Messrs. T. J. Smith,* T. P. Janes, W. W. Stone, R. J. Willis, John Speer, George W. L. Twiggs, A. J. Lane, A. Pope, Dr. J. S. Whitten and Henry P. Hampton, were the principal exhibitors of *Cotton*, most of which was of good quality, and some extra. *Corn*.—The fine yield of 103 bushels and 9 quarts was reported by Y. H. Wynn, a youth, of Habersham co.—41 bushels and 5 quarts by another, and 20 bushels, 22 quarts, by another. Excellent samples of *bread* and *stock* Corn were shown by Dr. J. M. Turner, M. M. Anderson, Y. H. Wynn, A. W. Shaw, William J. Eve, J. W. Tench and others. *Sweet Potatoes* of mammoth size and superior quality were shown by Middleton Seago, W. W. Stone, E. T. Shepherd, A. Griffith, &c. *Wheat*, of various kinds by R. C. Daniel, C. T. Shelman, J. E. Burch, the Cunningham Mills, &c.—*Barley*, by R. Peters and Jno. Dimon—*Oats*, by W. A. Lenoir, R. J. Butler, H. P. Hampton, G. M. Magruder, &c.—*Rye*, by John Dimon—*Peas*, by W. W. Stone, W. J. Eve, M. Seago, &c.—*Irish Potatoes*, by Dr. Geo. Battey, and A. Pope—*Ground Peas*, by Jno. Dimon and Dr. George Battey—*Turnips*, by Louis A. L. Boisclair, A. Griffith, &c.—*Tobacco*, by W. F. Butler and G. Volger; and various articles of similar character by other contributors.

CATTLE.—The number of entries in this class were about 50, though more animals were shown than these figures indicate. In *Devons* and *Ayrshires*, R. Peters was, as usual, the largest exhibitor; and all his stock was of its uniform and well known excellence. A fine *Ayrshire Bull* (imported) was exhibited by A. Griffith. Cols. A. G. Summer, and J. W. Watts also presented some very fine *Devons*. [We were informed that the so-called *Devon*(?) Bull to which the first premium was given is of more than doubtful pedigree; but, of course, the Judges were (or ought to have been) satisfied on this point before making their awards.] *Durhams*.—A very good lot of thoroughbred and grade *Durhams* were shown by Col. J. W. Watts, A. S. Lenoir, Geo. W. L. Twiggs, Jon. M. Miller, W. J. Eve, Dr. Whitten and others. *Grades and Natives* (many of superior milking properties) were presented by Phineas Butler, Aaron Roff, R. Peters, W. J. Eve, &c., &c. *Working Oxen* and *Fat Cattle* were few in number, but of fair merit. Wm. J. Eve, W. T. Lightfoot, George W. L. Twiggs and A. S. Lenoir, were the principal exhibitors. The show of Cattle, upon the whole, was excellent and encouraging.

HORSES.—Considerable more than 100 animals were shown in this department, all the classes being fairly and well represented, except that of "*Morgan, Canadian and Imported Horses*," in which there were no entries. The show of *Horses of all Work, Blood Horses, Matched and Single Horses*, &c., &c., was very satisfactory; but as we do not claim to possess great nicety of judgment in equine matters, we dare not attempt to discriminate in regard to the points of excellence or demerit presented by each animal. Nearly all were of good quality and many really superior. We do not think this show of Horses has ever been equalled or even approached at any of our previous Fairs. The list of exhibitors of Horses, (too long for our present limited space) will appear in our next.

JACKS AND JENNETTES.—We can say very little for this

* For residences of the contributors named, see Official List of Premiums in present number.

department. There were only two or three entries, and no animal of particular claims to attention among even these.

MULES—We noticed a few good Mules on the ground, from A. J. Griffith, Orme & Alexander, R. J. Butler, D. N. Heath, W. B. Cheeseborough, G. M. Magruder and others; but the show in this important class was far too meagre, and we hope to see it amended hereafter.

SHEEP—The show of Sheep was very fair—the *South Downs* of Mr. Peters, and *Merinos* of Col. Watts being especially commendable. The latter gentleman presented a number of grades; also a pen of the singular Broad Tailed Sheep, which attracted much attention. Samples of fat mutton Sheep were shown by J. C. Sproull, and fine heavy fleeces of shorn Wool by Col. J. W. Watts and R. Peters.

CASHMERE AND THIBET GOATS—Dr. Jas. B. Davis, the original importer of these exceedingly rare and valuable animals, presented a fine collection of the pure breeds and their crosses upon the common variety. Of the pure Cashmères, we need only say that they have thus far proved perfectly hardy and quite prolific in the South, and that their fleece (which is very heavy and abundant) is used in the manufacture of the finest cashmere shawls and other costly fabrics of oriental looms. One of these shawls, lately exhibited at the New York Crystal Palace, was valued at \$2700; and \$500 and \$1000 shawls are comparatively plenty among the metropolitan leaders of the "ton." We do not hazard much, therefore, in ranking this importation of Cashmere and Thibet Shawl Goats among the most important of recent Southern enterprises, and predicting for the fortunate possessors of these valuable animals the most gratifying success. We learn that Dr. Davis lately sold one pair to a Northern Company at \$1000, and that the remainder of his pure bred Cashmères have lately passed into the hands of a very successful and competent breeder of domestic animals (Mr. R. Peters) of our own State.

SWINE—The show of Swine was not large, but the samples were mostly of very good quality. The *Suffolk*, *Grazier* and *Essex* Pigs of Mr. Peters were all fine, as were also the specimens of other breeds shown by Jon. M. Miller, Dr. W. E. Dearing, Floyd Thomas, Phineas Butler, R. G. Butler and others. Col. A. G. Summer also exhibited a very superior *Suffolk* Boar of the Morris importation. With the exception of a small cage of fine young *Berkshires*, (from Col. Summer) none of this old and well known variety were on exhibition; but for the satisfaction of many who once regarded them with favor, we may state that there is every prospect of a new "Berkshire fever" and that they are now rapidly "coming into fashion"—a fact, which we confess to regard with much satisfaction; for we have always considered the Berkshire as too valuable an animal (especially for crossing) to be thrown wholly aside.

POULTRY, PIGEONS, BEES, &c.—The display of Poultry, (good as it has been at the late Fairs of the Society) upon this occasion far surpassed all previous exhibitions of the kind in the South; and, so far as regards the large Chinese and East Indian varieties, we feel quite certain that it has never been equalled in the Union. As conclusive proof of the hardiness and value of these varieties, we may observe that of the hundreds of samples presented, at least four-fifths of the number were of the kinds known as *Brahma Pootras*, *Chittagongs*, *Shanghai*s and *Cochin Chinas*, all of which resemble each other in size and general quality, though differing widely in color and outward appearance. The competition in these classes was very close and spirited, and the Judges were not a little puzzled to make the proper awards; but we believe it was generally conceded that the *Brahmas* of D. Redmond and Geo. W. L. Twiggs, the *Chittagongs* of Floyd Thomas, the

*Shanghai*s of Wm. J. Mims, and the *Cochin Chinas* of V. La Taste, were entitled to the first rank in their respective classes. The largest variety of domesticated barnyard and aquatic fowls (12 kinds) was presented by D. Redmond—fine *Wild Turkeys* by C. DeLaigle and Mrs. Ford—*Hong Kong Geese* of superior quality by Col. Summer, Geo. A. Oates and D. Redmond—*Chinese Geese* by Col. J. W. Watts and D. Redmond—*Bremen Geese* by Geo. A. Oates and R. H. Gardiner—*Game Fowls* by R. D. Glover, M. E. Heggie, James H. Carter, D. Redmond, Col. J. W. Watts and others—*Crested Ducks* by Geo. A. Oates—*Wild Geese* and *Dorking Fowls* by Col. A. G. Summer—*Top Knot Turkeys* by G. A. B. Walker and J. Sistrunk, and many specimens of different grades of merit by other contributors. *Pigeons*—a very superior show, including some 40 fancy varieties, from Master Joseph S. Dawson, of Chatham co., Ga. *Bees*—a fine Hive with honey from V. La Taste. *Rabbits*—some beautiful samples of the Lop-Eared Madagascar Rabbits were shown by R. Peters and Geo. A. Oates. These attractive little pets are very easily and cheaply propagated, and deserve a place in all collections of domestic animals, on account of the amusement which they afford to the younger branches of the household, and as an occasional resource for the table. Of all colors, from pure white to a jet black, they are (as an experimental study for the breeder of larger animals,) very highly prized in England and upon the continent of Europe. They came originally from the Island of Madagascar, and seem to thrive perfectly in the South.

DAIRY AND HOUSEHOLD DEPARTMENT—This Department was well and creditably filled; the principal contributors being Mrs. Wm. J. Eve, Mrs. T. J. Smith, Mrs. Dr. Means, Mrs. Lenoir and Mrs. A. J. Lenoir.

HORTICULTURAL DEPARTMENT, including Fruits, Fruit Trees, Hedge Plants, &c.—The season was too far advanced for a good display of Fruits, yet the fine collection of late-keeping Apples from William H. Thurmond—the beautiful Oranges (100) of Rev. E. Johnson, and the luscious Pears of Rev. H. L. Teane, did much to sustain the interest of this department. Very excellent samples of Catawba Wine were presented by N. Longworth, of Ohio—Scuppernon Wine, from Weller's (N. C.) Vineyard, by D. Redmond—Geneva (?) Wine, by Mrs. Flournoy—Blackberry Wine, by Mrs. Lenoir—native Wine, by P. A. Summey—Scuppernon Wine, by Mrs. S. Rose, &c., &c. We noticed, also, samples of the Sidonia (or Chinese) Quince, and the "Vegetable Pear" (*Sicyos Edulis*) from Mrs. T. M. Turner—a jar of Dried Figs from Mrs. Flournoy—Catawba Grapes, from Mr. Chas. Axt—Apples from Geo. Walker—dried Apples, from Mrs. Lenoir, &c., &c. *Fruit Trees*—Messrs. Thurmond, Van Buren, Summer & Crammond, and Mons. F. A. Mange, all exhibited fine and valuable collections. *Hedge Plants*—samples of Osage Orange plants were shown by D. Redmond—also cuttings of the Osier or Basket Willow. Mr. Redmond also exhibited 15 choice varieties of Strawberry plants, two varieties of Blackberry Plants, and two of Raspberry Plants. Strawberry plants, (Hov y's) in quantity, were also shown by William Haines. Excellent collections of Garden Seeds (67 varieties) were shown by A. Pope, and (40 varieties) by Mrs. V. La Taste. The very beautiful Orange Trees of Messrs. F. A. Mange, Mrs. V. La Taste, and Geo. A. Oates, (loaded with golden fruit) were deservedly admired. *Green House Plants*—Messrs. J. W. Bessman and F. A. Mange were large contributors to this interesting department; as were also Jno. C. Carmichael, Geo. A. Oates, Mrs. La Taste, and many others. *Vegetables*—Hugh Kennedy (Gardener of R. Peters) made a fine and extensive display, and many interesting contributions were also sent in by others whose names we have forgotten.

[Had we time and space, we would gladly extend our notice, lingering with pleasure over the beautiful handiwork of the ladies, and the rare gems of art, taste and skill, in their most attractive department. The "Baby Show"—"Southern Domestic" and "Other Manufactures"—"Southern Farming Implements," &c., &c., also deserve, at least, a passing notice; but our present limited room compels us to close here; promising in our next issue a full and complete list of all the entries made, which will convey to our distant readers something like an adequate idea of the extent and interest of the exhibition.]

For other Editorial Items, see page 86.

ANSWERS TO INQUIRIES, &C.

A SUBSCRIBER, Ridgeway, S. C.—Your communication was unintentionally overlooked. A writer in the Boston *Cultivator* gives the following as the result of his experience with Guano:

"I have made use of guano for many years, and in various ways. I put it in the hill for corn, but it did not fully answer my expectation, therefore, I thought I would try a new mode. In the spring of the year 1853, I took 100 pounds of Peruvian Guano and spread it broadcast on a piece of river meadow land, that has been cropped every year for probably more than fifty years, and plowed it in as I should yard manure, and the result was wonderful; it paid me at least 100 per cent. on the cost of guano. There was no other manure whatever put on the lot. I next took an old pasture lot as poor as poverty, and in the last of July, I spread on about 225 pounds to the acre and plowed it under, and in the first part of September I sowed my rye and harrowed it in, and the result was 60 shocks of rye from 3½ acres, which will probably yield as many bushels. For oats, I use about 250 pounds to the acre, and for mowing-land about the same sowed on after the grass has well started. For turnips, I use 3 pounds to the square rod, harrowing it in; for buckwheat, from 80 to 100 pounds per acre."

W. E. B. Crawford, Ala.—We do not consider the "Mexican" at all equal to the genuine Peruvian Guano, and cannot recommend its use to our readers.

W. F. N., of Hernando, Miss., desires the address of the manufacture of a portable saw-mill styled the "King of the Woods." Can any of our readers enlighten him?

A. N. B., Baton Rouge, La.—You can obtain Mustard Mills from the Agricultural Warehouse of R. L. ALLEN, New York. For information respecting the manufacture of Mustard, see *Farmers Encyclopedia*.

W. D. S. Mobile, Ala.—We regret that we cannot, at present, find space for the republication of the articles you allude to; but you will find an excellent article on Grape Growing and Wine Making in our October number of 1854, page 303.

"A. T. L."—The correspondent who contributed an article to our November number, over the above signature, will confer a favor by sending his real name and address to the editors, for the benefit of T. H., of Goshen Hill, P. O., Union District, S. C.

F. L., Providence, Miss.—We really cannot undertake to return communications sent us for publication. If the writers attach especial value to them, it would be well to take copies before sending them. The article to which our friend refers, has not been rejected, but is awaiting its turn among a mass of similar matter.

G. B. A., Milliken's Bend, La.—We do not know of a "Rotary Digging Machine" that we dare recommend; but have some hopes that GIBBS' "Rotary Spade" may prove valuable. As soon as the true merit of this new invention is ascertained, we will give our readers full information.

S. M., near Columbus, Ark.—We can send you bound volumes per mail, postage paid, at \$1.80.

A. J. S., Sandy Ridge, Ala.—Wood ashes, unleached or leached, would certainly prove valuable for such land as you describe. If you have plenty, you may sow 40 or 50 bushels to the acre, and plow it well in. We send you, per mail, the missing numbers. We cannot give any information as to the Alabama agency of STODDARD'S Shingle machine. Address T. P. STOVALL, of this city.

J. R. E., Wartrace Depot, Tenn.—The *Beveridge Willow* (Osier) is yet very scarce. We were disappointed in procuring the true variety until the present fall. When used as a fence, the wands or osiers are bent down horizontally and "plaited" or interwoven together. It can thus be made into a live hedge, that will flourish well on moist soil and be quite ornamental, though, of course, not very formidable or protective.

L. S. P. Houston, Texas.—Have handed your inquiries respecting STODDARD'S Shingle Machine to A. S. & A. D. HILL, the Agents, in this city.

A. J. B. Whiteville, N. C.—We are unable to furnish all the back numbers of our paper containing the articles of the late SIDNEY WELLER, on Grape Culture and Wine Making. We have had several requests to republish them, and would do so, had we sufficient space.

E. T. D., Jackson, Ala.—The Bermuda Grass may be propagated by clumps of the roots. Set out in deeply plowed and highly manured land, during moist weather in winter or early spring, and it will soon spread and cover the entire surface.

Rev. W. G. D., Oakland, Ala.—We will endeavor to procure a supply of the Mulberry you desire, and forward as you direct.

☞ A subscriber wishes to know the price of the following articles:

A Wheat Drill.

A good Horse Power.

Rowe's Corn and Cob Crusher.

He will see an advertisement of the Crusher in our present number, and if dealers in Agricultural Implements would publish, in Agricultural papers, a priced list or catalogue of their wares, their profits would be largely increased, and we would be spared much labor in endeavoring to answer inquiries of this sort.

J. DICKENSON & Co., Houston, Texas.—We never received the money to which you allude. There must be some mistake in the matter.

☞ Other inquiries, received just as we were going to press, will be answered in our next.

ACKNOWLEDGMENTS.

WE are under particular obligations to our friends for many kind favors, the varied character of which may be gathered from the following:

To the "Agricultural Manufacturing Company," of Nashville, Tenn., (through A. W. PETNAM, Agent) for 1 excellent *Subsoil Plow*, and one "No. 1 Peacock Turning Plow," a particular description of both will be in given our next. (CARMICHAEL & BRAN, Agents.)

To JAMES ROWE, Esq., of Bainbridge, Ga., for 3 panels or sections of his improved moveable Hurdle Fence. (ROBERT BUTLER, Agent, Hamburg, S. C.)

To W. A. LENOIR, Esq., Lenoir, East Tenn., for a sack of very superior (premium) dried Apples.

To Dr. GEORGE BATTERY, of Rome, Ga., for several sacks of his noted Irish Potatoes for the South. To the same, also, for samples of the famous, "Hunter Oats," Mammoth Pindars, &c.

To R. PETERS, Esq., of Atlanta, for a sack, each, of "Huntsville Barley," and "Egyptian" or "White Winter Oats." Also, for a fine assortment of superior Garden Vegetables, &c.

To J. VAN BUREN, Esq., of "Gloaming Nursery," Clarksville, Ga., for specimen trees of 30 varieties of his celebrated Southern Seedling Apples. Also, for a rooted vine of the Muscat Grape, bulbs of the Japan Lilies (*Speciosum* and *Rubrum*) &c., &c.

To WM. H. THURMOND, Esq., of "Downing Hill Nursery," Atlanta, Ga., for rooted vines of the "Thurmond (native) Grape," &c. For a description of this very valuable Grape see *Southern Cultivator* for September, 1853, page 274. To the same, also, for bearing trees of the Dwarf Italian or Chinese Peach—an arboretical curiosity.

To THOMAS AFFLECK, Esq., Washington, Miss., for a copy of his *Plantation Record and Account Book, No. 1.* This excellent work (of which we shall have more to say hereafter) should be in the hands of every planter who desires system, order and good management on his plantation. It will save 20 times its cost in one year (especially to absentees) and we commend it to the attention of both owners and overseers. It may be obtained per mail from Mr. AFFLECK, or we will supply it to order. (See advertisement of Mr. A., for terms.)

To LUTHER TUCKER, Esq., Editor of "The Cultivator," Albany, N. Y., for a copy of the illustrated Annual Register of Rural Affairs and Cultivator Almanac for 1855—a very neat and useful little volume of 144 pages, and over 100 engravings. It abounds in practical information for the Farmer, the Stock Raiser, the Fruit Grower, the Housewife, the Nurseryman, the Rural Architect, the Florist, &c., &c., all of whom should possess it. Price, in paper, 25 cents—bound, 50 cents—sent, pre-paid, per mail. Address LUTHER TUCKER, Albany, New York.

To JAMES O. ADAMS, Esq., Secretary of the "New Hampshire State Agricultural Society," for a copy of the Transactions of said Society for the year 1853—a very able and instructive volume of 400 pages, printed in superior style, and copiously illustrated.

To ROBERT NELSON, Esq., of "Troup Hill Nursery," Macon, Ga., for half a dozen trees of "Baldwin's Late" Peach—a splendid freestone variety, ripening about the 20th of October. This Peach originated with, or was first introduced by that very zealous and intelligent horticulturist, Dr. WM. O. BALDWIN, of Montgomery, Ala. Dr. B. has exhibited fine and perfect specimens of this fruit at our Fairs as late as the 23d of October, and we have no hesitation in pronouncing it the very best late Peach that we have any knowledge of. We understand that Mr. NELSON is devoting especial attention to the Peach and expects soon to be able to supply a list of varieties ripening from the middle of June to the first of November.

To LEWIS G. MORRIS, Esq., of West Fordham, N. Y., for a plaster cast of his prize South Down Ram—a very faithful and artistic model of a perfect specimen of this well known breed—(for engravings and descriptions of South Down Sheep, see present number.)

To SUMMER & CRAMMOND, "Pomaria Nurseries," Alston, S. C., (through Col. A. G. SUMMER) for a bundle of choice Apple trees, mostly Southern varieties, of their own raising. It will be noticed that these gentlemen were successful competitors at our late Fair for one of the prizes in this class.

To Dr. J. B. CARLETON, Athens, Ga., for a pair of choice white Musk Ducks.

To Dr. JAS. CAMAK, Athens, for fruit of the *Sicyos Edulis*, an edible vegetable, known in some sections as the *Mango* or *Vegetable Pear*.

Many favors similar to the above—unacknowledged, but not forgotten—might be added to this list; but we think we have published enough of the "good deeds" of our friends to prove that there are roses as well as thorns in editorial life. That the former may plentifully strew the paths of all our kind subscribers and readers, during the year which is just about dawning upon us, and that the glorious cause of Southern Improvement may receive from us all a vigorous impulse and steady support, is our earnest wish and prayer.

LONGWORTH'S AMERICAN WINES.

N. LONGWORTH, Esq., of Cincinnati, the great pioneer in American Wine making, very kindly sent a sample of the product of his vineyards to our late Fair. The following brief note accompanied the Wine. It was addressed to the Secretary of the Society, and will be read with interest:

CINCINNATI, OHIO, October 4, 1854.

DEAR SIR—Fifty-three years since, I was a resident at Savannah, and old recollections lead me to send you some Sparkling Wine, from native Grapes, and request that you will appoint a committee of Champaign Wine drinkers, and let them test its quality with the best champaign wine of France.

Wine, (the pure juice of the grape), I believe, will do more for the cause of Temperance, than all the Temper-

ance Laws passed can accomplish. I, this spring, put up 150,000 bottles of Sparkling Wine, and am now building two more wine houses and cellars. I also have Still Catawba Wine, resembling Hock, the pure juice of the grape, and Sweet Wine, to which some of the best loaf sugar is added as it comes from the press. Yours truly,

N. LONGWORTH.

SOUTHERN CENTRAL AGRICULTURAL SOCIETY.

THE Executive Committee of the Society will meet in Atlanta, on *Tuesday, Jan. 16, 1855*, for the purpose of arranging the Premium List for the present year, determining the *location* of the next Fair, and transacting such other business as may come before them. We will endeavor to give the result of their deliberations in our next (February) number. The following gentlemen constitute the Board for 1855:

EXECUTIVE COMMITTEE.

President—Hon. THOS. STOCKS, Greensboro', Ga.

Vice Presidents—Hon. M. A. COOPER, Etowah, Cass co., Ga.; Col. P. M. NIGHTINGALE, Albany, Ga.

Col. J. M. DAVIDSON, Woodville, Georgia.

WM. J. EVE, Esq., of Augusta, "

B. A. SORREY, Esq., Columbus, "

Col. J. S. THOMAS, Milledgeville, "

Col. AUG. S. JONES, Savannah, "

Maj. J. S. ROWLAND, Cartersville, "

Dr. JNO. S. LINTON, Athens, "

RICHARD PETERS, Esq., Atlanta, "

BENJ. E. STILES, Esq., Savannah, "

WM. M. D'ANTIGNAC, Esq., *Treasurer*, Augusta, Ga.

Dr. JAS. CAMAK, *Secretary*, Athens, Ga.

☞ Papers friendly to the cause, throughout this and the adjoining States, please copy.

AN APPRECIATIVE SUBSCRIBER.

MESSRS. EDITORS—I write to inform you that the *Cultivator* has been rather irregular in its visits this year, notwithstanding it has always found a welcome in my house. The January, May and October numbers have never come to hand; and, as you have been kind enough to send missing numbers to many of your subscribers, I feel encouraged to ask that favor for myself, for there is no paper that I esteem above the *Cultivator*. I never get a number but I feel that I have received the worth of one dollar. So, you see, I have lost three dollars worth of your paper!

If I did not value your paper so much I would not trouble you at this late day. I have been reading the *Cultivator* 3 years, and have every number that I have ever received, and would not part with them for \$1 per number, if the back numbers could not be had. So you will perceive that I am in for years to come, if life lasts that long.

I intend to try to double my subscription for the year to come by getting at least one new subscriber. How many will double next year? *Cannot all do so?* If the paper is only shown to our friends, it will speak for itself.

Yours, respectfully,

A. J. S.

Lowndes Co., Ala., 1854.

REMARK.—We need scarcely remark that it always affords us pleasure to send missing numbers of the *Cultivator* to our subscribers, when we have such numbers on hand; which, however, is not always the case. A. J. S. has our thanks for his good wishes, and we trust many more of our subscribers will emulate his example in adding each one more to our list.—Eds.

PUBLIC DOCUMENTS.—Hon. ALEX. H. STEPHENS will accept our thanks for various public documents of value and interest.

Horticultural Department.

WORK FOR THE MONTH.

[JANUARY, (Latin, *Januarius*) was so called by the Romans from, *Janus*, one of their superior deities, to whom the first day of the year was sacred. It corresponds to SEBAT, (Zech. i. 7.) the *fifth civil* and *eleventh sacred* month of the Jews. The Anglo-Saxons called it *After-Geola*, that is, *After-Christmas*.]

THE PLANTATION.

Push your *plowing* vigorously, whenever the ground is not too wet—turn under all vegetable matter, that it may decompose, and yield nutriment to the coming crops of *Corn* and *Cotton*. *Plow deep*, and if you have no regular subsoil plow, let your turning-plow be followed in the same furrow, by a bull-tongue, or broad coultter, drawn by a stout team. This will loosen up the subsoil, and bring into cultivation a portion of your land, which heretofore has been of no use to you. The old system of *surface scratching*, to the depth of three or four inches, must be abandoned. No planter in the South should pretend to plant a crop of *Corn* or *Cotton* in less than 10 inches of mellow and well-manured soil. Try *deep plowing* one year, and you will need no urging hereafter.

Manure should now be hauled out, distributed over the ground, and plowed deeply under. Scatter it evenly, so that all the plants may be fed.

Spread all trash, weeds, corn and cotton stalks, &c., and turn them under with the plow. Haul leaf-mould from the hollows of the woods, and compost it with barn yard manure, lime and ashes, before you spread it on your fields.

Fill up gullies with logs, brush, &c., and run ditches horizontally along your hill sides, to prevent washing. *Deep plowing* will also be found of great benenefit on hill sides subject to wash.

Repair old buildings—erect new ones—look over and repair your farm implements—take good care of your stock, and keep all work animals in good condition for the hard labor they will have to accomplish the coming season.

Commence your farm operations *this year*, with the determination to make larger crops than heretofore—to practice a more thorough system of plantation and domestic economy—to avail yourselves of all the lights of agricultural science—to improve your old worn-out fields—to *keep out of debt*—and by your earnest and persevering efforts to elevate the vocation of the Farmer to its rightful position at the head of all other professions.

THE GARDEN.

Sow early varieties of *English Peas* during the first fortnight in January, and continue to sow a succession every week during the spring and early summer. Hoe and earth them up in dry, warm weather, and set a row of sticks to support the vines as soon as they require it.

Cabbage, Lettuce, Radishes, Salsafy, Spinage, Parsnips, Beets, &c., may now be sown on ground properly prepared. Choose a warm exposure—spade, manure and pulverize your beds well, and do not plant your seed *too deep*.

Irish Potatoes may now be planted for an early crop. Plant the sets 8 or 10 inches apart, on coarse litter, long manure or straw, in the bottoms of deep trenches, three feet apart. Put a handful of manure on each set, and cover it with five or six inches of earth. Haul the earth well about the stems as they advance in growth, but do not cover the tops with dirt.

Prepare all your garden implements for use, this month; and get your groundspaded or plowed thoroughly, turning deeply under all the manure or vegetable matter that you can obtain.

Hot Beds should be prepared the latter part of this month, in order that you may have a good supply of Cucumbers, Cabbage, Tomato, and other plants for spring operations.

THE ORCHARD.

Plant out all the finest varieties of *Apples, Pears, Peaches, Plums, Apricots, Nectarines, Quinces, Pomegranates, Figs, Grapes, &c.*, giving the preference in all cases, to trees and vines propagated on *Southern* raised stocks. Graft choice varieties of the *Plums* and *Apricots*, into strong, healthy roots of the wild Chickasaw Plum. Propagate the *Quince*, the *Pomegranate* and the *Fig* largely by cuttings, planted in deep, moist soil and mulched. Graft choice varieties of the *Pear* into roots of the *Angers Quince* for dwarfs. The Pear and the Apple will grow from *cuttings*, but not very freely—try them, however, using scions from choice varieties. See directions for planting trees in present number.

Orchards that have been allowed to grow up in grass and broomsedge during the Fall and Winter, should be cross-plowed between the rows, leaving a space as far as the branches extend to be stirred up with the grubbing hoe. Be careful not to injure the roots by this working—dig in some well-rotted manure, (muck, lime and ashes)—cut away all suckers, and leave a space around the tree open and mellow. As soon as warm weather approaches, this space must be mulched with saw-dust, pine-straw, forest leaves, long manure, or any substance that will retain moisture.

PACKING TREES FOR TRANSPORTATION.

TREES over three or four feet in height, should be made into bundles for transportation. Small plants go best in boxes, unless with large trees in the same bundle. Swamp or pond moss is the material in which to pack the roots. It holds moisture a long time, and is not liable to heat like other vegetable matter. When for a distant destination or subject to detention by the way, it is best to "puddle" the roots of trees previous to packing; that is, dip them in a thin mortar of clean sand and clay: and let it harden a little before packing; or what is better, dry the surface by sifting over fine dry sand or soil, stored up for the purpose. Rye straw is the best covering for the stems, and to serve as a second envelope for the moss covered roots—the whole to be firmly bound with cords, (with a half-hitch at each turn) or what is deemed preferable—good *withes* of hickory—osier or native willow—or species of cornus, very abundant in moist woods, and on stream borders. For a finish, envelope the bulb of roots (and when thought best, the whole bundle,) in Russia matting, or any broad sacking fabric, and with a curved needle and stout twine, secure it in place; and then, rest assured that your bundle will bear any reasonable amount of rough handling; and if neither exposed to rain or frost will keep a month and more in good condition.—*Prairie Farmer*.

THE CONCORD GRAPE.

At a meeting of the Concord Farmers' Club, Oct. 5th, the following gentlemen were appointed a Committee, to examine and test the Concord Grape and make report to the Club. Joseph Reynolds, W. W. Wheildon, S. G. Wheeler, Wm. D. Brown, James P. Brown. The Committee made the report which I now send you.

The Committee upon the Concord Grape report that they have attended to the agreeable duty assigned to them, and that in their opinion the Concord grape possesses, in a high degree, the essential properties of a perfect grape, beauty of form and color, richness of fragrance and flavor, and abundant juiciness. Its skin is thin and remarkably free from astringency. The vine is a free grower, an abundant bearer, and very hardy in its habits, and what

renders it peculiarly valuable, in our New England climate, is the fact that it ripens two or three weeks earlier than any other good variety with which they are acquainted. They congratulate Mr. Bull, the producer of this seedling grape, upon the success which has resulted from his patience, perseverance and skill, and they congratulate the horticulturists of the country upon the addition of so fine a variety to our native grapes. Your Committee have partaken of more than one bottle of wine made from this grape, but they assure the members of the Club that they do not speak under the influence of wine when they say that they know of no other grape in this country, as well adapted to the production of wine, as the Concord grape.

In behalf of the Committee,

JOSEPH REYNOLDS, *Chairman.*

[*New England Farmer.*]

THE following very able series articles, from the pen of Dr. JENKINS, of Mississippi, were originally published in the *Natchez Courier*. They abound in valuable information, and should be carefully perused by all fruit-growers, horticulturists, and land-owners in the South:

FRUIT CULTURE IN THE SOUTH.

No. 1.

MESSRS. EDITORS—Preliminary to some views I will give upon the subject of fruit culture in the South, in a subsequent number, I desire in the present communication to call your attention to the entire range of horticulture, and the bearing the subject presents to the Southern landholder as a source of wealth.

In times past, the products of the garden, but more especially of the orchard, received only a partial attention, or were entirely neglected among us; but at the present day, no one who reads the Southern periodicals devoted to horticulture can have failed to perceive that this department of our industrial resources has received a vast impulse and that the opinion so generally entertained that the horticultural productions of temperate latitudes could not be successfully grown in the planting States, is entirely fallacious.

The rapidity and facility of carriage by railroads converging to the sea-board ports of South Carolina and Georgia, in connection with their weekly or semi-weekly lines of steamships to the North, has enabled the planters of the interior to supply the markets of the great Northern cities with the smaller fruits and vegetables, before the frost and snow have disappeared from the earth at the North. Tons of early peas, of corn in roasting ears, of Irish potatoes, of okra, of beans, and other table luxuries, are now annually raised for export to Northern consumers, and yield a larger profit to the Southern grower than any crop he can cultivate. Nor has the enterprise of the people of those two States been confined to a single department of horticulture as a source of wealth. Flourishing nurseries have been established: vast orchards of fruit trees have been planted; varieties of fruit originated, better suited to the climate than exotie sorts; and the test been fully made that they can supply Northern markets with delicious varieties of the apple and the pear, fully two months earlier than similar fruits mature at the North.

Our own State not having as yet the facilities of access to market enjoyed by our brethren on the Atlantic sea-board can hardly be expected to rival them in extent of production; nevertheless our exports already are by no means inconsiderable. I have been unable to ascertain the value of our peach crop and garden produce sent to the New Orleans market, but I have good authority for saying that one of our orchardists upon the low lands of the river has this year realized from the sales of his fruit in the New Orleans market fully eight hundred dollars to

the acre. When the great lines of railroad now under contract are completed through the interior of our State, a portion of the lands and the laborers upon its borders can be most profitably diverted from the culture of cotton to the products of the garden and the orchard, and the supply of both Southern and Northern markets will add greatly to the wealth of our State.

That we enjoy a soil and a climate admirably adapted to the successful culture of the best marketable fruits, cannot be doubted. A skillful and enterprising planter of Warren county has proved that the pear can be grown in his locality, and yield on immense profit to the acre. Having been favored with the perusal of a letter addressed by Col. Hebron to one of my neighbors, I am enabled to state that his present year's crop has yielded him a profit of six hundred dollars per acre, and when all his trees now planted (about 10,000) come into bearing, I cannot doubt but his sales will reach, if they do not exceed, \$50,000 per annum. I can also state that his trees are planted in the midst of his cotton, (thus securing them a thorough cultivation,) and that when at mature age, the loss to his cotton crop from their shade, and the land they occupy, is about one-half. Supposing, then, his entire cotton fields planted with fruit trees, he raises still half a crop of cotton, and has the large profit of \$600 per acre besides from his fruit. This profit will not appear surprising, when we take into consideration the fine quality of his fruit its rarity, and consequently its high price at Southern markets.

Even at the North, where there is keen competition, the profits of fruit growing have been larger than that of any other crop. I see from the reports of the New York State Agricultural Society, that the sales of the farmers in this department have been generally as high as \$100 per acre. The famous Pelham orchard of Newtown pippin apples, upon the Hudson river, so skillfully cultivated by suitable rotation of manures as to be kept in bearing every year, has yielded annually several hundred dollars to the acre; and although Mr. Pell has had numerous competitors, still the price of his apples rose steadily in the London market from nine to over twenty dollars per barrel. His gross sales from 2000 bearing trees, by recent report, amounts \$40,000 per annum. I could refer to many other orchardists at the North, whose profits have been as large, but deem it unnecessary. These results show how valuable a return from the land the orchard is capable of producing when science is called into requisition in the culture of the trees, and when painstaking is had in gathering and shipping the fruit. It also shows how readily the planter in the South (in many localities) may be able to add other sources to his income in addition to his cotton crop. The Northern farmer puts one part of his land in grass, another part in oats, another in wheat, corn, potatoes, &c., and these crops maturing in succession, guard him against the heavy loss he might otherwise incur from disease, insects or drouth, in case he confined himself to the culture of a single staple.

I will now refer to some statistics of importance in connection with this subject:

The late Mr. Downing, in the second volume of the *Horticulturist*, estimates from data furnished in the patent office reports of Mr. Burke, that the value of the horticultural products of the entire Union amounts to over \$450,000,000. That its products are more than half as great as those strictly agricultural; almost as large as the whole manufacturing products of the country; and half as large as the manufacturing and all other interests, excepting the agricultural, combined.

In connection with the industrial resources of our country, so vast a source of wealth is just cause for national pride—our products from the garden, the orchard and the nursery far exceeding in value those of any other country. France alone approximates near to rivalry with us. I

find in the *Revue Horticole*, of Paris, that the yield of her horticulture for 1846 (not including the vine) is estimated at \$120,000,000, and giving employment to two and a half millions of laborers; and that the vine culture yields a product annually worth \$100,000,000, and gives employment to 5,000,000 of her population.

In an age so utilitarian as ours, the foregoing view of the subject may invest it with stronger claims to attention than any other. It strikes me, however, that there are other and important considerations, especially worthy of notice among the people of the South. As you well know, the South has for years been throwing from ten to twenty millions of dollars annually into the lap of the North, in the excursions of her people for travel and pleasure during the summer months. Suppose one-half or a third only of these millions had been annually devoted to the advancement of rural architecture, to the embellishment of our grounds in landscape gardening, to the cultivation of the choicest fruits and flowers among us; and who can doubt but the Southerner would find his home invested with more than oriental beauty, and opening a source of enjoyment presenting far higher attractions than the unsubstantial pleasures of the Northern tour?

In a country where lands are so cheap as in the South, there is no one but who by thrift and industry may soon become a landholder, and there is no occupation in rural life whose agencies are greater in developing social, moral, and intellectual refinement in a community, than devotion to horticulture in all its departments. Its pursuit adds elegance to comfort, and throws a new and magic charm over country enjoyment, by refining its occupations into grace, and softening its aspect into beauty.

In the earliest history of our race, we read that the patriarch had attained the summit of earthly happiness, when he could sit under the shadow of his own vine and fig trees; and no higher, or sublimer tribute to the beautiful was ever penned, than when the sacred writer exclaims, "Consider the lilies of the field, how they grow; they toil not, neither do they spin; and yet even Solomon, in all his glory, was not arrayed like one of these."

No. 2.

In my last article, I called your attention to the open field the pursuit of horticulture presents to the people of the planting States, as a source of wealth, and also the well ascertained fact, that the value of the horticultural products of our country amounts annually to over \$400,000,000. This immense production, however, is confined chiefly to the Northern, Middle and Western States. By the census reports of 1850, I find that the value of the products of the orchard, (not including the garden,) of the small State of Massachusetts, amounts to nearly as much as the entire products of ooth gardens and orchards, in the vast area covered by the planting States of South Carolina, Georgia, Alabama, Mississippi, Louisiana and Texas. If, as I contend is the case, both the soil and the climate of the planting States is better adapted to producing a larger yield to the acre of these products than that of Massachusetts, why, you will ask, this general neglect in the South of so important a branch of our industry? The answer, it strikes me, is plain, and easy of solution; and it is, that the South, until very recently, has been entirely dependent upon the Northern nurserymen for their seeds and their fruit trees. This is a matter of grave consideration with us. I do not doubt but the planting States in the last 30 years have purchased from European and Northern nurserymen to the extent of many millions of dollars; and the almost universal failure in the growth, and indifferent quality of the fruit from imported trees, has given rise to the belief so prevalent, that the soil and climate of the South was unsuited to the production and maturity of the popular fruits.

I grant that the Peach may be transplanted from the North to the South, and do well, and in some instances the Apple, and that under a favorable combination of circumstances, such as the early lifting of the trees at the North in the fall, short voyages out, and a propitious season for transplanting, that even the Pear may have succeeded in some hands; but where one has met with success, thousands have made failures, and have erroneously deemed the climate or soil of the South in fault.

I cannot better illustrate this point than by giving my own experience. Some 15 years ago, I imported from England 100 trees of the Pear dwarfed upon the Quince; at that time a great novelty, and not to be procured from Northern nurseries. The trees opened sound and healthy; were carefully planted out, and as carefully mulched and cultivated. Most of them, however, died the first summer; some few for years made feeble attempts at growth, and at this day but two trees out of the whole shipment are living, and these have never yet borne fruit; while buds I inserted from these trees into home-grown stocks, have made trees of luxuriant growth, and borne fruit worthy the gardens of the Hesperides.

Again—I imported from different Northern nurseries in all about 1,000 trees; and finding in the first shipments put up with matting in bundles, that rats had barked the roots of most of them, I ordered subsequent shipments put up in tight boxes; paid 50 cents per foot for freight by steamers, but again met with loss and disappointment; for although the trees opened sound, and healthy-looking externally, the black streak in the pith when the wood was cut foretold too plainly their fate when planted. Nearly all died, as they had undergone a heating or sweating process on the voyage through the Gulf, and out of my whole importation, not one-third of the trees are now living; and such even as have lived, have neither grown so vigorously, nor borne specimens of fruit so large and healthy, as I have raised from their scions grafted into native seedlings. *Per contra*—wishing to procure some European varieties of the Pear and the Apple of great rarity, and knowing that Mr. Affleck, of this country, had imported the genuine sorts from the famous English nursery of "Rivers," and propagated them upon native stocks, I ordered from his nurseries 200 trees of the Pear, and 100 of the Apple, and out of this order I lost but a single tree; all grew off luxuriantly, and many of them have borne fruit which may be equalled, but not excelled, in any region of our country. In looking over the patent office reports for the answers to the enquiries upon the subject of fruit growing in the South, I find complaints of Northern trees noted in every volume.

Mr. Van Buren, of Georgia, states as follows:—"Southern raised trees succeed much better, come into bearing sooner, and are more durable than those imported from Northern nurseries."

Mr. Morton, of Virginia, says:—"Northern trees, however fine their fruit in their appropriate climate, seldom yield good fruit here. I have 12 or 13 acres in fruit trees, and while I do not believe I have lost one native tree by the weather, several of Northern origin die annually—most of them die from the freezing of the sap, bursting the bark from the wood, which happens in hard weather after one of the warm spells in winter."

Mr. Whitfield, of Hancock county, in our State, asserts that \$30,000 have been thrown away in that county in the importation of fruit trees from the North. This view of the subject is corroborated by Mr. Chisholm, of South Carolina, and Mr. Harwell, of Alabama, and indeed by all the horticulturists of any eminence in the Southern States, whose opinions have been made public.

If it is so plain, then, that the want of success in the South in fruit culture has been mainly owing to our dependence on Northern nurseries, it is no less plain that

the remedy will be the establishment and support of nurseries in the South. The States of Georgia and Alabama have several flourishing nurseries, and the public spirit of such men as Mr. Affleck, and Col. Hebron, and Mr. Lambert, and no doubt others unknown to me, has given to our State a large supply of home grown trees; and although these gentlemen may not reap the profits they deserve, still they will enjoy the grateful satisfaction of knowing that they have been public benefactors.

In this connection, allow me to make a few remarks upon the subject of *acclimating fruits in the South*. It is well known that all our popular fruits originated in climates as warm as our own. The Peach, the Apricot, the Cherry, the Pear, and the Apple, are all of them natives of warm regions in Asia and Europe. It was the skill and cultivation of the ancient Greek and Roman that first subdued the harsh and sour crab into the mellow, crisp and breaking apple; the bitter and austere mazzard into the fleshy, luscious and nectared cherry. The Romans, in their burning climate, two thousand years ago, successfully cultivated no less than thirty-six varieties of the pear, twenty-two varieties of the apple, and eight kinds of the cherry. Upon the overthrow of the Roman Empire, and the advance of civilization into more temperate latitudes, these fruits were gradually introduced, and in time acclimated to colder regions.

In the animal kingdom, we find that when man or the domestic animals are transported from a cold to a tropical latitude, exercise is attended with extreme fatigue, and the important functions of the body deranged; and it is not until they undergo a period of seasoning, or acclimation, as it is called, that they can brave the climate with impunity, or exert the prolonged strength of the native. And so in the vegetable kingdom; a tree grown in the cold regions of the North, with its dense woody fibre, and contracted sap vessels, when transported and exposed to our burning sun, is unable, from the texture of its wood and circulatory system, to radiate through the leaves, and effect through them those changes in the sap necessary to the deposit of woody fibre.

If a section is taken from one of our forest trees, say the sassafras or the locust, the annular rings will be found to be twice the width, and the caliber of the sap doubly as large, as in the same species of the tree grown in a cold climate. However, then, the philosophic may speculate as to the cause, the fact is undeniable, that a tree grown from the seed of an exotic fruit, or a bud from such tree inserted into a native grown stock, will grow off more luxuriantly, and bear fruit of a healthier character, than any Northern tree transported to our climate. In support of these views, I have noticed that the few varieties of the pear and the apple which were introduced into this county by the early Spanish colonists, and first grown from seed and continued by repeated grafting in native stocks, are remarkable for the healthy and vigorous growth of their wood; the exemption of their fruit from rot, and its holding on to the tree to full maturity, which is rarely the case in trees not fully acclimated.

The late Mr. Downing, in a private correspondence with the writer about ten years ago, upon the subject of acclimation, and after learning the character of our climate and the mineral constituents of our soil, predicted that our planting States would in time originate *new varieties* of fruit rivaling those of temperate latitudes, and that even exotic sorts would be found to improve by grafting or budding the same variety through successive generations upon native stocks. In confirmation of his opinion the horticulturists of Georgia have described and brought to light about twenty native varieties of the apple, many of which have been classed as "best" by the fruit conventions at the South. In our State, I have learned of several excellent varieties of fruit cultivated in perfection fifty

years ago, but which, from change in ownership of property, have died out, and been lost from want of attention to propagating them; and in our own county, I have discovered an early pear, ripening in May, of the highest excellence, and no doubt a native seedling fruit.

Fearing I may be occupying too large a space in your columns, I will defer to another number a notice of such varieties of fruit as have succeeded best in my locality, together with some practical remarks upon their culture.

RECTOR.

[To be concluded.]

FRUITS AND THEIR CULTURE, NORTH AND SOUTH.

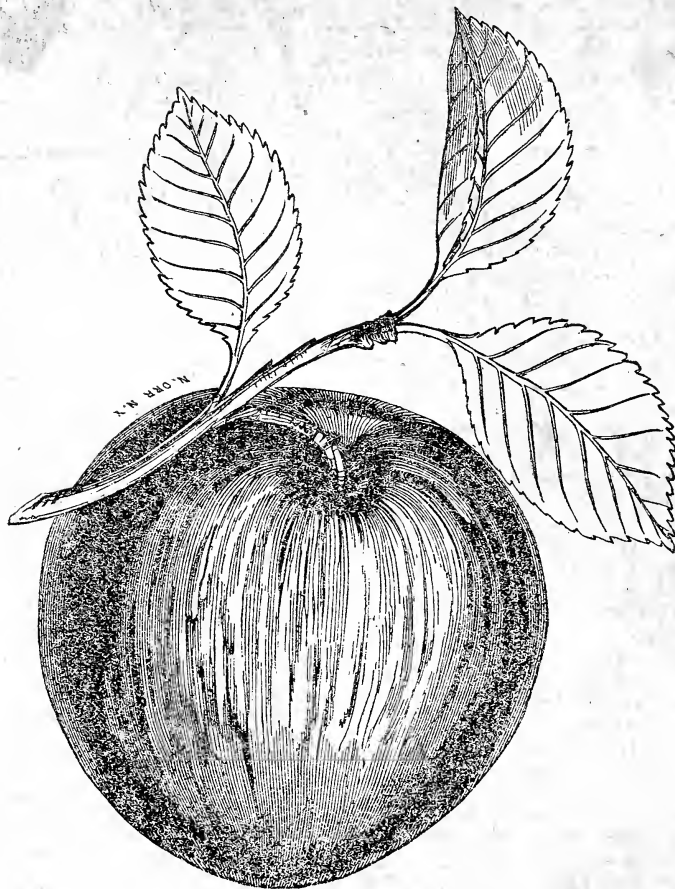
In allusion to the difference of opinion between Mr. VAN BUREN (see *Southern Cultivator* August 1854, page 257,) and the senior editor, (May number, 1854, page 144,) as to the respective merits of Southern and Northern fruits, a very competent and experienced correspondent at Newburgh, N. Y., writes us as follows:

MESSRS. EDITORS—I am much obliged for the number of the *Cultivator* containing the account of Southern apples, &c. Dr. LEE and Mr. VAN BUREN are both right and both wrong in some points. New York State, as a whole, no doubt, can beat Georgia for apples in quantity (per acre) in quality, and long keeping, (that is the same kinds.) Apples grown in the Northern part of our State keep much longer than those grown in the Southern part. I can easily believe that peaches and melons are much better with you than here, because they require the hot sun to sweeten them; and it is possible that early Southern apples may be; but I cannot think winter apples are, because with you the sun is too hot, and they ripen rather prematurely. If they could continue to grow with you until frost begins to appear, they might equal ours. As to what Mr. JOHNSON says about his eating apples in Philadelphia and New York markets, it is no test at all. Occasionally, you will find good fruit there, but not as a general thing. He says our "Baldwin, Spitzenberg, &c.," do not equal their "Hall;" but had he found the "Hall" in New York market, grown in the same orchard with the "Baldwin, Spitzenberg, &c.," he probably might not have known it. I have my doubts if the "Hall" will do much here, or any of the Southern apples, except a very few kinds; the summer varieties may; I have many of them on trial, and will report, if my life is spared.

I can readily believe that your native apples, (that is, seedlings grown in your section,) will be better with you than our native varieties; and I think, as a general rule, that all kinds of fruits are better in the neighborhood where they originated than elsewhere. There is a few exceptions to this. I do not think the world can produce such apples as our Newton Pippins, grown in New York State, and yet I am told you cannot grow them South. Sweet potatoes grow and produce well here, but they have not the flavor of those grown South, and your Irish potatoes cannot equal ours.

You make mention of the New Rochelle Blackberry. I went to Mr. LAWTON's on purpose to see the fruit, and I can truly say I never saw blackberries before. The fruit is large and sweet, and the crop enormous. C. D.

VINE GROWING IN ALABAMA.—W. D. STONE, Esq., of Mobile, writes us that he has now "upwards of 20 acres of the Scuppernon Grape, and expects to have as many more acres set in January and February." We rejoice in this evidence of the enterprise and taste of Mr. S., and hope many of our readers will be induced to follow his example.



SOUTHERN SEEDLING APPLES— No. 5.

"MANGUM" APPLE.

SAID to be a native of Jackson county, Ga., and exhibited by Wm. H. Thurmond, Esq., of Atlanta, at the State Fair of 1852. An excellent Apple, of medium size, and keeps well till March. Tree very prolific, and certain of a crop.

J. VAN BUREN.

Clarksville, Ga.

THE TEXAS OAT GRASS, ALIAS THE RESCUE.

MESSRS. EDITORS:—As the origin of the so-called Rescue Grass is fully established by irrefragable testimony as the Texas Oat Grass, we shall so consider it in the remarks which we are now about to submit.

When the advantage claimed for this grass over all others as a winter pasture for stock was first urged upon the attention of the public, we felt inclined, from the evidence of things not seen, and in the absence of any reported experiment, to test, at some future day, its relative value with rye or barley, as green food. Accordingly, we planted in drills, the 20th September past, on a well prepared piece of ground, several short rows of the Texas Oat, and alongside a few of rye, with the view of cutting and feeding it to our milch cows, horses, &c., as had been our custom.

On the 15th inst., the rye having attained to the height of 6 to 8 inches, we proceeded to cut it, and obtained from one row 15 lbs. The Texas Oat could not be cut, (a sickle being used,) being only about three inches high; each germ or stem standing solitary and alone, with no appearance of tillering out. In the meantime, one of our

horses had intruded upon the plot three or four hours at two different times, and had cropped the rye quite low in places, without seeming to observe that the oat grass was there.!

It has usually been our practice to get three cuttings of rye thus sown, during the winter and spring. But it still remains to be seen which will yield the greatest amount of green food, and the product in hay, after the grasses are left to seed.

As we propose a series of reports, we will reserve further remarks for your February number.

ALGERNON.

December 19th, 1854.

REMARKABLE.—Messrs. Wells & Sturgeon of the Emigrant Ferry, have sent to this office a couple of hen's eggs about half the ordinary size, with the accompanying note:

"On the first of May we bought six hens, and on the second of July, our first chickens came from the shell; and at this present date we have five eggs laid by the July brood—their age being just two months and nine days old."—*Shasta (Cal.) Courier.*

TRANSPLANTING FRUIT TREES, ROSES, SHRUBS AND EVERGREENS.

Messrs. SUMMER & CRAMMOND, of the Pomaria (S. C.) Nurseries, furnish the following excellent practical hints and directions on this important subject. We quote from the *Columbia South Carolinian* of a recent date:

A tree should never be taken up whilst it will visibly shrink upon removal. We have no criterion in the dropping of the leaves of the forest trees, as the origin of forest trees is so various, that many kinds require a certain degree of cold to stop their growth. Young nursery trees, too, being well cultivated, hold their leaves longer and grow more luxuriantly than fruit-bearing trees in orchards—so the proper time to transplant is, whenever the juices of the tree become inactive. A dry summer, with an extreme degree of heat, followed by a delightful and seasonable autumn, prolonged into the heart of winter, has, with us, added a third more wood of late growth to trees, and has, at the same time, delayed the season for transplanting.

In South Carolina, we find no difficulty in transplanting trees and shrubbery from November 25 to as late in the spring as we can retard the leaves. Trees should never be touched when the soil is frozen. The milder and drier the weather in winter, the better the success will be had. We dig our holes, after plowing the land, as deep as we can; twelve inches deep, and at least five feet in diameter. We half fill these holes with good, rich vegetable compost, broken bones, &c., and then place the tree in its proper position, the earth in the hole being a little more elevated immediately under the trunk. We then place the roots so that they are arranged in every part of the hole, when it is filled up carefully with a similar compost. The tree should not be planted more than one inch deeper than it stood in the nursery. When the hole is about three parts filled, we pour gently around the stem about five gallons of water, after which the operation is finished by completely filling it up, and making a slight mound around the trunk. We never pack in the earth around a tree, as the watering will consolidate it sufficiently around the roots to make it grow. This watering will be all the tree will require, if it be properly mulched with leaves, straw, saw-dust, or old tan-bark. If trees have been long out of the ground, the roots should be well soaked six hours before planting, and we have frequently revived such as were to all appearance dead, by burying them entirely in the earth for ten days, after having restored vitality to the bark by soaking them in water. The trunks of all newly transplanted trees should be protected from the sun. A bunch of broom sedge, so common everywhere in the South, if properly tied around them, is the very best means of doing so. We head in all trees severely, no matter how fine the roots may be. Bearing trees should be prepared for removal one year previously, by cutting in both their heads and roots; but, at best, the removal of large trees in the South is hazardous and unprofitable. Stakes to trees are useless. When a tree will not stand erect, it should be manured and cut in, till it acquires sufficient vigor to stand alone. We would as soon think of tying a baby to a stake to make it stand, as a tree. The knife and food is all a tree requires to keep it erect and vigorous. Until newly planted trees are firmly rooted, they should be regularly inspected and straightened up. When watering is necessary, the earth should be removed for a few inches from the tree, and the water poured gently around the trunk, till the earth in the vicinity of the roots absorbs it. This should be done in the evening to be effective, and the small hole made should be carefully filled up the next morning by sunrise, with loose mellow earth, after which the mulching should be placed around

the tree. When the buds of a newly planted tree are dormant and late starting, we have frequently found that an additional watering of the limbs and trunk immediately roused them into active growth. In fact, by wrapping the stem and limbs of a valuable pear tree, the roots of which had been destroyed by rats on shipboard, with rags, and regularly moistening them, we preserved the variety, and induced the tree, which had not a vestige of fibrous roots left, to live and flourish. It is now as vigorous as need be, and its roots have spread as widely as its top.

For transplanting roses, evergreens, and shrubbery, we would advise the deep and thorough preparation of the soil throughout the whole plat, and then plant much in the same manner as directed above for fruit trees. Roses and deciduous shrubs, and such evergreens as do not belong to the *Coniferae* and cypress families, should have their heads well cut in. The *Pinaceae*, embracing the sub-orders of *Abietae* and *Cupresseae*, and in which are comprised the Firs, Cedars, Arborvitae, Cyresses, Larches and all resinous evergreen trees, together with the yews, do not require much pruning, when transplanted, as it must be done when the trees are very small. The Holly, both native and foreign, and which, under proper culture, is a beautiful evergreen tree, requires great cutting in when transplanted. All land, before planting trees should be thoroughly drained.

We receive so many queries as to these things, that our leisure will not permit us to answer each correspondent separately, however much we might be inclined to do so. We therefore hastily embody the above hints, and ask the newspapers of the South to give them publicity, as matters of general interest to their readers.

THE SUMACH.

BY WM. R. PRINCE, FLUSHING, N. Y.

As a spirit seems now most appropriately awakening toward the development of the natural resources of our country, we may hope ere long to realize the noblest aspirations of the noblest man our country has produced, carried out to a conclusive result by rendering our country independent of all foreign supplies of such commodities as may be readily produced from our own soil.

Sumach is one of the articles which we have hitherto imported largely, and I therefore send you some explanatory remarks on the subject. The *Sicilian Tinner*' Sumach is a rather tender shrub for any latitude north of New York. It would succeed in New Jersey, and to the South of it.

With regard to our native Sumach, we have four, and perhaps five, species that possess a sufficiency of tannin to render them valuable for domestic use and for commerce. It will be requisite to test them all, in order to select the preferable species for extensive culture.

The species found so common in neglected fields and along the road-sides, is the *Rhus glabrum*, producing crimson berries in large clusters; and it is this which has been already made use of, to some extent—more especially in Connecticut and other Eastern States. Its usual height is about four and a half feet.

A taller growing species is also quite common, and is the *Rhus typhina*. It usually attains the height of ten to twelve feet, or more, with small clusters of dingy red berries.

A third species is *Rhus copallinum*, which is quite common in dry woods and fields, more especially where the soil is sandy. This species has more resemblance to the Sicilian Sumach than any other American species, in its foliage, and its gray bark and growth. It attains a height of seven to eight feet, and produces dull reddish berries, in small clusters. I should incline to the belief

that this is the preferable native species for tanning; and fortunately it is disseminated far to the south and west, though seldom found north of New York. The Indians of the Mississippi and Missouri make use of the leaves of this species, as tobacco.

A fourth species is *Rhus aromaticum*, which is not found in this State, or to the north or east of it. Its most northern limit is Pennsylvania, thence extending to Carolina and Kentucky. This is a shrub of about four feet in height, with trifoliate leaves, which distinguish it from all other species. It grows naturally in moist localities. The leaves, when rubbed, emit a very strong odor.

The four species I have described all possess tannin to a greater or less extent.

A fifth species, in regard to which I have doubts, is the *Rhus vernix*, or Poison Sumach tree. This is found usually in low grounds, and attains a height of eight to ten feet. The leaves are pinnate, and resemble those of the ash so much that it is often called Poison Ash. Its berries are white. Every part of this small tree is poisonous, not only in the growing state, but, as I am assured by those who have suffered from it, even when vegetation has ceased and no sap is flowing.

Having now reviewed all the species which may be applied to the object desired, I will refer to a Chinese species, *Rhus succedaneum*, from which the red lac is made, and which might be introduced and cultivated here. It is singular that so many useful and so many poisonous shrubs should be comprised in one genus.

In addition to the poisonous species already described, we have in plenty around us *Rhus toxicodendron*, or poison ivy—a vine which runs over so many fences and climbs so many trees; and in Pennsylvania and Virginia *Rhus viridiflorum*, also very poisonous: and there is also *Rhus pumilum*—a dwarf shrub, found most plentifully in Vermont and Lower Canada, and also said to grow in Upper Canada, which is deemed the most poisonous of all.

In California they have the Yedra, or *Rhus viride*, which abounds in the mining districts, growing under the oak trees, and is the only plant there that looks green and flourishing during the torrid heat of summer. Most wofully have the miners suffered from this poisonous plant.

In the Island of Java there is a poisonous species, *Rhus Javanicum*, so celebrated for its deleterious properties that it has been sometimes confused with the Bohon Upas tree, of fabulous notoriety. There is another species found at Macao, and one in Barbary, and above a dozen species are natives of the region about the Cape of Good Hope; but of these the peculiar properties are unknown.—*Horticulturist*.

RUST IN COTTON.—BUD WORM IN CORN, &c.

MESSRS. EDITORS—I have been a subscriber to your invaluable journal only for this year, but I find I have received information already which I could not have gained otherwise in years by my own judgment. I find in your journal communications from many of the first farmers of the South upon different subjects, but more about the improving of lands that had long since ceased to be productive under the old plan of surface or skinning cultivation, which have proved to be of great use to me; but, sirs, I have not noticed in any of your communications of the best plan to prevent Rust in Cotton on such land as we have here in the Prairie. Our soil is mostly sand, mixed with clay, and is what might be called a sandy loam. A few years back this same land was not surpassed anywhere in the valley of Mississippi for its fertility, but for several years cotton has been so severely attacked by the Rust that it was entirely killed in the month of August, and the yield has been very small. Would not it benefit the land and prevent the rust to subsoil? Our

old, experienced farmers contend that it would destroy the fertility that is even now there, to subsoil, but I think different; for I have noticed in digging ditches through the field, that at about the depth it had usually been plowed there appeared to be a very hard streak about three inches thick, indeed so very hard that it was with difficulty that a spade could be forced through. This is my reason for it: the water, air, or roots cannot penetrate through this crust, and when it rains in August the water stays on top and the roots being so very shallow the stalk scalds and drops its forms and dies immediately after, which it has done for several years past, after the first heavy rain in August.

And the same reason, I think, is the cause of the Bud Worms ruining our Corn every spring. They are a small white worm with, apparently, a head at each end, as they crawl, with equal facility, each way, and appear to eat both ways at once. They commence just above the roots and eat through in the course of one night.

I should like very much for you to publish this in the *Cultivator*, and remark whether you think my opinions are correct or not, and also for your correspondents to give their opinions.

Yours respectfully,

GAMALIEL.

Prairie Mer Rouge, La., 1854.

REMARK.—We have had no experience which will enable us to enlighten our correspondent; but shall be pleased to hear from any of our readers upon the subject.—Eds.

INDICATIONS OF A GOOD COW.—To the marks furnished by the veins and the scutcheons, says Magne, are to be added the following:

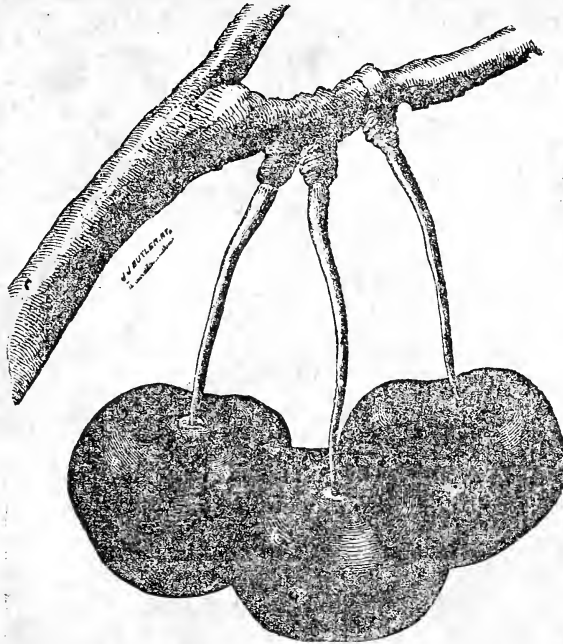
"A homogenous, very voluminous but yielding udder, sinking much by milking, covered with a thin skin and fine hair; a good constitution, an ample chest, regular appetite and great inclination to drink; flesh rather lean than fat; a slender, supple skin; soft, short hair; a small head, fine horns, quick eye, gentle look, feminine air, and fine neck.

SOLIDIFIED MILK.

SOME time since we noticed the discovery of a Mr. BLATCHFORD, of New York, of a process for solidifying milk, by which it was converted into cakes and kept pure and sweet for any length of time. The New York Academy of Medicine, to which the process was submitted for investigation, placed the subject in charge of a Committee, who, at a late meeting, through their Chairman, Dr. GRISCOM, made a report which is summed up thus by a correspondent of the N. O. *Bulletin*:

"The paper commenced by referring to the many methods used to preserve food for long voyages, etc., and particularly upon the hitherto futile results of all attempts to preserve milk without admixture. The committee have carefully examined the whole process of manufacture, and have traced the milk through every process, from the cow to the consumer. The process of manufacture is simply that of concentration by boiling. The milk is placed in shallow pans, and after a mere trifle of carbonate of soda is added (a drachm to ten gallons,) to neutralize any acid that may be formed by the first application of heat, it is then boiled down to half its quantity, then some pure white sugar is added and the evaporation is continued till it is left in solid cakes like soap. In this state the chemical and microscopical characteristics are left unchanged, the butter globules remaining intact. One pound of this is worth twenty-five cents, and is equivalent to five pints of milk. To effect this change, it is to be dissolved in water, when it is fresh country milk, scarcely distinguishable from the best fresh milk, save that it is somewhat sweeter, and capable of being used for all culinary purposes, the same as milk fresh from the cow.

"As at present manufactured, there is a very slight empyreumatic flavor to it, which is expected to be entirely obviated by future changes now effecting in the implements used. The paper will shortly be published."



BLACK TARTARIAN CHERRY.

THIS splendid variety of the Cherry, which is also known by the name of the Circassian Cherry, Superb Circassian, Black Russian, Frazer's Black Heart, and Ronald's Black Heart, it is said to be a native of Spain, having been carried to Russia, thence to England. It is also said to have been brought from Circassia to England, by Mr. Ronald, in 1794. "It is distinguished for its large obtuse-heart-shaped, shining purplish-black fruit, with an uneven surface, containing a rich tender flesh, and hangs in clusters. It is a cherry of great excellence, bears plentifully, ripens early, and readily commands in the market double the price of the ordinary kinds." The tree

grows rapidly, is very ornamental, and is, on all accounts, worthy of general cultivation.

The Cherry Tree (*Prunus Cerasus*), is said to have been introduced into Italy from Pontus, in Asia, by the Roman general, Lucullus. Cherries were hawked in the streets of London in the beginning of the 15th century. There are between two and three hundred varieties under cultivation.—*People's Journal*.

The Cherry is rather uncertain in the South, especially on the seaboard—it succeeds tolerably, however, in many sections of the "up country," and should receive increased attention everywhere.

TO KILL THE PEACH BORER.

H. N. LONGWORTHY, an experienced fruit-grower, of Western New York, furnishes the following for Moore's *Rural New Yorker*:

Your late correspondent, Mr. E. H. Prior, on the peach-grub, manifestly writes with much practical knowledge on the habits of the peach-grub or borer. His mode of treatment, so far as it goes, to destroy the grub on a limited or small scale, is a very good one. Although the hot water practice, as above alluded to would be a very convenient and safe remedy for a few trees about your dwelling, yet for a more extended business, I would submit the following mode of managing the peach-grub, which I have practiced for the last fifteen or twenty years:—Some time in April, when the ground has become dry, and the weather mild, with a trowel or hoe remove the earth from the tree sufficiently deep to reach the worms; then with a regular pruning-knife (for no other instrument but a hooked, pointed knife is so well adapted to the work,) remove all grubs that have imbedded themselves under the bark of the tree; then return the earth to the tree. Also heap up around the tree, four or five inches high, a small quantity of leached or unleached ashes, or old lime; if these cannot be obtained, earth will accomplish the same object nearly as well. The after treatment is to remove the mound from the tree, where you discover any appear-

ance of gum which will give opportunity to scrape off with your knife all the young grubs that have commenced their depredations. This latter process should be performed in the month of September, always keeping the mound up around the trees.

FRENCH WINE STATISTICS.—Among the many bad things swallowed by the American people, it is charged upon them that they drink an immense amount of bad wines and liquors. For aught we know, this may all be true; but from the following statistics furnished the New York Farmer's Club, at a recent meeting of that body, it will be seen that there is enough of the genuine article produced in and exported from the wine-growing regions to quench a vast deal of thirst. The Maine law, in several of the States of this Union, has not seemed to interfere with the use of the article to such an extent as to keep prices from advancing in consequence of the great falling off in production.

Nearly 5,000,000 acres of land are employed in the cultivation of the vine in France, from which is made annually 900,000,000 gallons of wine. The average value is 15 cents a gallon. The French wines have doubled or trebled in value within two past years. Average annual total value of the wine crop, a fraction less than \$100,000,000.

EXPORTS.—50,000,000 gallons are annually exported. The south-western and south-eastern districts of France are the most productive.

BRANDY.—12,000,000 gallons of brandy are annually exported.

EXCISE.—The excise duty on wines and their distillations in 1858 was \$285,000.

LABORERS.—The number of persons employed in the culti-

vation of the vine and manufacture of wine is a fraction short of 2,000,000; and 240,000 persons are engaged in selling wine. Most of the wine lands are untillable, sterile and hilly. The wine culture does not average a return of more than 1½ per cent annually.

DISEASE.—The disease of the vine is pretty general throughout France, though the southern section suffers most. This disease has prevailed for three or four years, and threatens to destroy the business.

TO CORRESPONDENTS.

As usual, we are obliged to defer the publication of many favors from our kind and attentive correspondents; but all contributions of value and interest shall appear in due season.

LOTTERY OF IMPROVED LIVE STOCK, FARMING IMPLEMENTS, &c.

A CORRESPONDENT, of Enterprise, Ark., suggests that some of our wealthy agriculturists should make up a Lottery "scheme," in which the prizes shall consist of choice specimens of the finest breeds of Cattle, Horses, Sheep, Swine, Poultry, &c.; also, rare and valuable seeds, agricultural implements, books on agriculture, horticultural and rural affairs, etc., with a view of disseminating these different articles widely throughout the country.

We do not think the idea at all a bad one; and have no doubt that it would result beneficially to the country at large, if properly carried out. But in this, as in all other similar enterprises, everything would depend upon the management. Should this fall into the proper hands, we stand ready to aid the project to the best of our ability. Who will take the initiative step in the "Grand Southern Agricultural Lottery?"

ARTIFICIAL ROCK AND HURDLE FENCE.—Among the practical novelties of the late Fair, we noticed a specimen of the famous "Cotton Seed Rock" and Fire Proof Cement for Roofs, from the Agent, Mr. JOHN COWAN, of Memphis, Tenn.; and several ingeniously constructed panels of moveable Hurdle Fence, from JAMES ROWE, of Bainbridge, Ga. After a careful examination we were very favorably impressed with all these articles, and hope to see their value properly appreciated by the public.

TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY.—HON. B. P. JOHNSON, (the very able Secretary of the New York State Agricultural Society,) will accept our thanks for a copy of the Transactions of 1853. This volume, (which is the *thirteenth* issued by the Society) contains 783 pages, with many appropriate illustrations. It abounds in very valuable information on all subjects pertaining to agriculture, horticulture, stock raising and general farm economy; and we hope to present some of its contents to our readers hereafter. A further notice is precluded by the fact that it only reached us as our paper was going to press.

SUMACH LEMONADE.—MR. D. R. W. DAVIS, of Cottage Hill, has not been satisfied with his first experiment with Sumach berries for punch and lemonade. He has recently made a syrup from them, a sample of which he has left with us. It possesses all the delicate flavors of the lemon juice, but unluckily it has too much sugar in it. This defect does not at all detract from the value of the discovery. The fact is established that Sumach berries furnish an acid every way equal to that obtained from lemons, which may be used for all purposes for which the latter is employed, and procurable at the season when the lemon is very scarce and high.—*Alabama Planter.*

SEE article on the different varieties and qualities of Sumach, in present number.

BABIES AND POULTRY!—BARNUM'S great "*National Poultry Show*" will be held at the American Museum, New York, on the 15th inst., and the "*National Baby Show*," at the same place, on the 5th of June next. Premiums to the amount of \$500 will be awarded to the feathered bipeds, and \$1000 in prizes to the featherless darlings. The happy possessors of fine chickens and children are notified to be on hand with their best specimens, in due season and good order.

IRRIGATION, DRAINAGE, &c.—A friend of ours, who is a very competent Civil Engineer, an accomplished draughtsman, &c., wishes to make engagements with planters and others for the laying off and construction of Hill Side Ditches, Drains, Dykes, Embankments, Ponds, &c., &c., on reasonable terms. Any person desiring his services may address the editors of this journal (post paid.)

A LADY FARMER!—A fair subscriber, near Tuscumbia, Ala., writes us as follows:

MESSRS. EDITORS—Please find enclosed \$1, for which send me your valuable journal the ensuing year. Many thanks for the pleasure and profit of its perusal the current year. Here I am with my saw-dust again. Is there no way of composting the dust of oak, so as to convert it into manure? Where can I get the Baden Corn?

Yours respectfully,

A. M.

REMARK.—Saw-dust is an excellent *mulch*, or top-dressing for strawberry vines, fruit trees, &c., but we do not think it would "pay" to use it in any other way. Who can give us any information respecting the Baden Corn?—Eds.

SEVERAL interesting articles, original and selected, are unavoidably laid over until our next.

Domestic Economy and Recipes.

BAKED BEETS.—A good housewife assures us that the mode of cooking beets herein described, is preferable to all others:

"Beet root cannot be too much recommended to the notice of mankind, as a cheap and salubrious substitute for the now failing and diseased potato. Hitherto the red kind has been only used in England as a pickle, or as a garnish for salad; even the few who dress it, generally boil it, by which process the rich juice is lost, and the root consequently rendered less nutritious by the quantity of water it imbibes, as well as by parting with the native syrup, of which it is thus forcibly deprived; it is, therefore, strongly recommended to bake instead of boiling them, when they will be found to afford a delicious and wholesome food. This is not an untried novelty, for both red and white beet root are extensively used on the continent; in Italy, particularly, they are carried about hot from the oven twice a day, and sold publicly in the streets; thus they are purchased by all classes of people, and give to thousands, with bread, salt, pepper and butter, a satisfactory meal. There are few purposes for which baked, or even roasted or fried beet root, would not be found preferable to boiled."

GREASE FOR COARSE BOOTS.—Take a coal made of pine, of the size of a hen's egg, well burnt, pulverize it finely, mix it with enough of clean melted tallow to make it of the consistence of thick paste. Two or three applications will make the leather soft, and will keep the water out.

TO PRESERVE IRON AND STEEL KNIVES FROM RUST.—Procure some melted virgin wax—the purer the better—and rub it thoroughly over the blades of the knives. After it has dried, warm the knives, and having carefully removed the wax from the surface, rub them briskly with a dry cloth until the original polish is fully restored. This will fill all the pores with the unctuous and minute particles of the wax, which will adhere firmly, and prevent the intrusion of water or moisture, which is the cause of rust.

TO CLEAN WINDOW GLASS.—Take finely pulverized indigo, dip into it a linen rag moistened with vinegar, wine, or water, and apply it briskly to the glass. Wipe off and polish with a dry cloth. This method of cleansing window glass imparts a brilliant polish, and is far more expeditiously accomplished than cleaning with soap suds or whiting.

BATTER PUDDING WITHOUT EGGS.—Mix six teaspoonsful of flour with a little milk, a teaspoonful of salt, two teaspoonsful of beaten ginger, and two of the tincture of saffron. Mix it with nearly a quart of milk, and boil it an hour.

COUGH IN HORSES.—It is said that small twigs of cedar chopped fine and mixed with their grain, will cure a cough in horses, and that this has been used with complete success.

Advertisements.

ATKIN'S SELF RAKER REAPER AND MOWER.

THREE seasons use of this ingenious, beautiful and yet simple Machine, furnish convincing proof of practical worth. Three hundred, scattered into 9 different States the past season, mostly in inexperienced hands and nearly all giving good satisfaction, cutting from 50 to 600 acres, proves it not only strong and servicable, but also simple and easily managed. It saves not only the hard work of raking, but lays the grain in such good order as to save at least another hand in binding.

It is warranted to be a good, durable Self-Raking Reaper, and I have also succeeded in attaching a mowing bar, so that I also warrant it as a Mower.

Price at Chicago, of Reapers \$170; of Mowing Bar, \$30; Discount on the Reaper, \$5, and on the Mowing Bar, \$5, for cash in advance or on delivery. Price of Mower, \$120.

Pamphlets giving all the objections and difficulties, as well as commendations, sent free, on post-paid applications.

Agents, suitably qualified, wanted in all sections where there are none.

J. S. WRIGHT,

Jan55—ft "Prairie Farmer" Warehouse, Chicago.

ROWE'S UNVALUED PRIZE CRUSHER has had its patent extended for seven years from the 24th of April, 1854. It is generally acknowledged that this is the only Crusher worthy of the name. It has never failed to take all the first Honors and Premiums whenever exhibited, or brought in competition. It may be truly said, it has no rival. It is the only mill in the world that crushes to powder and mixes thoroughly, Corn, Cobs and Shucks or Straw; answering the treble purpose of Mill, Crusher and Straw Cutter. It is unrivalled for pulverizing Rock-plaster, Shells, Tan-bark, &c.; and will outlast, in wear, ten of any other Crushers. For particulars address

JAMES ROWE, Patentee, Bainbridge, DeCATUR Co., Ga. I will furnish a millinery for pulverizing Quartz and superintend the erection for \$100, and warrant the mill to crush a ton per hour of running time. This does not include the engine belt or pulley on the motive power. Any wanting Portable Fence, strictly practical, address as above

Jan55—2t

AYRSHIRE HEIFERS FOR SALE

AT \$100 EACH

HEIFER, "PARAGON," one and a half years old, calved March, 1853; dam "Princess Mary," grand dam imported "Mary Queen of Scots;" sire, imported bull "Robert Burns;" "Princess Mary" gave 18 quarts per day, "Mary Queen of Scots" upwards of 30 quarts.

Heifer, "MARIE OUISE," one and a half years old, calved March 1852; dam "Maria Teresa," y imported "Germantown," grand dam "Mary Queen of Scots," imported from Scotland; sire, imported bull "Robert Burns;" "Maria Teresa" gave 2 quarts per day, "Mary Queen of Scots" gave 8 quarts

Jan55—1t

RICHARD PETERS, Atlanta, Ga.

IMPORTED GARDEN SEED, &c.

THE Subscriber has on hand, a large and full assortment of the best English GARDEN SEED of every variety. Also, White and Red CLOVER; Lucerne, Birds, Blue and Time-hay GRASS SEED; White and Red ONIONS; OSAGE ORANGE. OREGON PEAS; FARMER'S PLASTER; GUANO, &c., &c. For sale, either at wholesale or retail, by

N. B.—Orders from the country will receive prompt attention.

Jan55—3t

OSIER WILLOW.

CUTTINGS of the *Salix Viminalis*, the best Osier Willow cultivated will be furnished by the subscriber at \$5 per 1000. They can be forwarded during the winter or early spring, to all parts of the Union. Also, OSAGE ORANGE plants at \$5 per 100.

Jan55—4t

S. P. HUGH, Albany, N. Y.

AGRICULTURAL WAREHOUSE AND SEED STORE,

(NORTH EAST CORNER OF 7TH AND MARKET, PHILADELPHIA.)

THE subscribers are now prepared to offer the Public, one of the largest and best collection of AGRICULTURAL and HORTICULTURAL IMPLEMENTS and FLOWER, FIELD and GARDEN SEEDS, to be found in the United States. Having taken over seventy premiums for implements at the Pennsylvania State Agricultural exhibition, at Philadelphia, the present season they can recommend the superior quality and variety of their implements and machines with the greatest confidence, and will furnish to order any thing for the Farmer or Gardener or Fruit-Grower, by wholesale or retail, Garden and Flower SEEDS tested in their own grounds, neatly put up in boxes for dealers to sell again. Fruit and Ornamental TREES and SHRUBBERY of every description, from their Nurseries at Westchester, near Philadelphia. Native and foreign GRASS SEEDS for sale, as are adapted to our climate. They are, also, agents for SUPER-PHOSPHATE OF LIME, GUANO, and other fertilizers; also, for most of the new and improved IMPLEMENTS lately introduced. Illustrated implements, a so Nursery and Seed Catalogues forwarded by mail to all post-paid applications.

PASCHALL, MORRIS & CO.,

Agricultural Warehouse and Seed Store,
Corner of 7th and Market, Philadelphia.

Dec—3t

OREGON GARDEN AND FIELD SEED.

THE rapid and luxuriant growth of this new variety of Garden or Field Pea, has induced the subscriber to procure some for sale. One pint of the Seed, cultivated properly, has been known to produce twenty-five bushels. They are useful both for the table and for stock. A supply received via New Orleans, and for sale by

Feb64—ft

WM. HAINES, Augusta, Ga.

PENARIA NURSERIES--1854-'55:

WE offer for sale a choice collection of the most celebrated and best varieties of PEACHES, PEARS, (both Standard and Dwarf), on Quinces, PLUMS, CHERRIES, NECTARINES, APRICOTS, QUINCES, FIGS, STRAWBERRIES, and NATIVE GRAPE VINES. Also, 10,000 APPLE TREES, well grown, embracing 150 varieties of rare excellence. We offer those to the trade, or by the hundred, at low rates. New and rare ROSES of the finest kinds and latest importations, FLOWERING SHRUBS, rare and beautiful EVERGREENS, &c., &c. Priced lists sent to all post paid applicants. Packages carefully sent by Railroad. Address

Dec—3t

SUMNER & CRAMMOND, Alston, P. O., S. C.

AUGUSTA SEED STORE,

(Nearly opposite the United States and Globe Hotels.)

THE Subscribers has received and will continue to receive throughout the season, his stock of Genuine and Fresh GARDEN SEEDS, crop of 1854. The usual deductions made to Country Merchants.

J. H. SERVICE.

N. B. Grant Asparagus Roots, White and Red Onion sets, White and Red Cover, Lucerne, Blue Grass, Timothy, Osage Grange, Oregon Peas, &c., &c.

Dec—5t

TROUP HILL NURSERY,

Macon, Georgia.

THE subscriber offers for sale a large assortment of grafted Fruit Trees of superior quality, containing many new Southern varieties, not to be obtained in any other Nursery.

The collection of ever-blooming Roses is unrivalled; the bushes being strong, and all raised on their own roots (none budded or grafted.) Also, a fine collection of the newest and finest Evergreens, Bulbous Roots, etc.

Catalogues sent to applicants.

All persons who delight in horticulture, are invited to call and examine for themselves, and nobody, I hope, will leave my establishment unsatisfied.

[Dec—1t]

ROBERT NELSON.

A. GARDELLE,

LOUIS DELAIGLE.

GARDELLE & DELAIGLE,

(formerly of Augusta, Ga.)

FACTORS AND COMMISSION MERCHANTS, Accommodation Wharf, Charleston, S. C.

REFERENCE.—Messrs. Bustin & Walker, Augusta, Ga.; Doughty & Beall, Augusta, Ga.; J. Fraser & Co., Charleston, S. C.

Liberal Advances made on consignments of Produce.

September—6t

ONE DOLLAR AND TWENTY FIVE CENTS.

ELLIOT'S FRUIT BOOK;

OR, THE AMERICAN FRUIT GROWER'S GUIDE IN THE ORCHARD AND GARDEN. Sent free of postage

"A large number of Western apples and other fruits are described in this book, which are not found in other books of the kind; and the remarks on the selection of varieties for Western culture, propagation, management, &c., as far as we have had time to examine seem to us judicious and valuable. Every nurseryman and fruit grower, especially in Ohio and the Western States, should procure a copy."—*Ohio Cultivator*.

"But the chief value of the book lies in its practical details—in its classifications and specifications of the different methods of training they require. This branch of the subject, which is very full, is copiously illustrated by drawings."—*Phila. North American*.

"It is a book that every farmer and fruit grower may profitably read."—*Rochester Daily American*.

"As Mr. Elliott resides in Cleveland he is much better acquainted with what fruits are adapted to the Central States than horticulturists who reside on or near the Atlantic seaboard. This fact gives the work great additional value to those who are engaged in cultivating fruit in the Mississippi Valley."—*Democratic Press, Chicago*.

"Elliott's Fruit Book is the most direct and practical of any treatise that has fallen under our observation; clear and minute in its directions, both as to modes of culture and qualities of the different kinds and varieties of fruit. We recommend its purchase as an investment that will speedily return many hundred fold."—*Binghampton Democrat*.

"It contains much matter of practical value to fruit growers in the new States."—*Rural New Yorker*.

"The great mass of the matter is marked with correctness and with much knowledge of fruits, and the work will, of course, stand at the head, so far as its descriptions of Western varieties are concerned; and as such we strongly commend it to the fruit raising portion of the community."—*Country Gentleman*.

"This work, from the examination we have been able to make, will probably be found one of the best works on Pomology yet published. The author has had the aid of many of the best fruit growers of this country, and gives drawings of numerous varieties of each class of fruit."—*Am. Farmer*.

"Mr. Elliott has long been known as a practical horticulturist, and as an able writer on Pomology."—*Boston Cultivator*.

"It embodies all the latest important information pertaining to fruit-culture, and we can recommend it as a thorough and reliable work—got up for its intrinsic worth, not for speculation."—*Northern Farmer*.

"Such a book cannot fail to secure a ready and extensive sale in every part of the country."—*Godey's Lady's Book*.

"Mr. Elliott is definite in his descriptions, and a man of experience in the culture of fruits in the orchard and garden, and favorably known."—*Practical Farmer*.

"From what we have seen and read, we cannot hesitate in recommending it as in many respects the most complete and valuable book of the kind in existence. The descriptions of fruit are full, clear, and methodical; and the illustrations of the best order—not mere outlines—but full, or half-section figures, with cores, seeds, &c., as true to nature as we have ever seen. The book cannot fail of being useful in a high degree."—*Prairie Farmer*.

"The author of this work now before us has given us a very valuable work on the cultivation of fruits. He was amply qualified to do so, having been for ten years engaged in the nurturing of trees and noting their products."—*Michigan Farmer*.

C. M. SAXTON, Publisher,
152 Fulton st., New York.

Nov—tf

THE HORSE, THE HORSE, THE NOBLEST OF DOMESTIC ANIMALS,

AND the one most frequently ill-treated, neglected and abused. We have just published a book so valuable to every man who owns a Horse, that no one should willingly be without it. It is entitled, **THE MODERN HORSE DOCTOR**, and is from the pen of that celebrated English Veterinary Surgeon, Dr. Geo. H. Dadd, well known for many years in this country, as one of the most successful, scientific and popular writers and lecturers in this branch of medical and surgical science. The book which he now offers to the public, is the result of many years' study and practiced experience which few have had.

From the numerous and strong commendations of distinguished men and the newspaper press, we select the following:

Extracts from a letter from Hon. John H. Clifford, Ex-Governor of Massachusetts.

New Bedford, May 11, 1854.

DR. DADD,—Dear Sir:—I hope your new work on the noblest creature that man has ever been permitted to hold in subjection, (the Horse,) will meet with that success which all your efforts in this direction so well deserve. Your obedient servant,

JOHN H. CLIFFORD.

From Hon. Marshall P. Wilder.

Boston, May 18, 1854.

DR. DADD,—My Dear Sir:—I am greatly obliged to you for the valuable treatise, the results of your own investigations, which you have recently issued, hoping that it may meet with the patronage of a discriminating community.

I remain yours with great regard,

MARSHALL P. WILDER.

The Modern Horse Doctor, by Dr. G. H. Dadd, is a manual of genuine science, and ought to be owned and studied on the score of humanity, as well as interest, by every man who owns a horse.—*Boston Congregationalist*.

Dr. Dadd has had great experience in the cure of sick horses, and explains the secret of his success in this volume.—*N. Y. Tribune*

The author of this work is well known as a most skillful veterinary surgeon. His book is based on the soundest common sense, and as a hand-book for practical use, we know of nothing to compare with it.—*Yankee Blade*.

We know Dr. Dadd well, and are satisfied that he possesses most important qualifications for preparing such a book as this.—*New England Farmer*.

Messrs. Jewett & Co. have just published a very valuable work by Dr. Dadd, a well known veterinary surgeon, on the causes, nature and treatment of disease, and lameness in horses.—*Farmer's Cabinet*.

This is one of the most valuable treatises on the subject, ever published; and no owner of that noblest of the animal race, the horse, should be without it. Especially should it be in the hands of every hotel and livery-stable keeper. To many a man would it be worth hundred dollars every year.—*Ind. Democrat, Concord*.

By far the most learned and copious work on the horse and his diseases we have ever seen.—*N. Y. Evangelist*.

One of the greatest and most commendable qualities of this work, is, it is practical and plain to the comprehension of those farmers and others for whom it is mainly designed. The course of treatment favors generally a more sanative and rational system of medication than that recommended in any previously existing works on farriery. No farmer or owner of a horse should be without this book. Stable keepers, stage proprietors and hackmen, we believe, would derive profit by having at least one copy hung up in their stables for use and reference by their stable men.—*Daily News, Philadelphia*.

There is more common sense in this book than any of the kind we have ever seen, and farmers and owners of horses would find it a matter of economy to possess themselves of it. It will be of more service than the counsel of a score of ordinary doctors.—*Albany Courier*.

We deem this decidedly the best and most reliable work on the "Cause, Nature and Treatment of Disease and Lameness in Horses," ever published.—*Nantucket Enquirer*.

What we have read of this book induces us to regard it as a very sensible and valuable work; and we learn that those much more competent to judge of its value, have given it their unqualified approval.—*Ev. Traveller, Boston*.

This book supplies a great desideratum which Skinner's admirable treatise on the Horse did not fill. Every man may be his own veterinary surgeon, and with much greater safety to this noble animal, than by trusting him to the treatment of the empirical itinerants who infest the country. It is well illustrated, and should be purchased by every man who owns a horse.—*Ev. Mirror, N. Y.*

This is a book that should be forthwith put into the hands of all who own or drive horses, whether for the dray or gig, for the plow, omnibus or road, for hard service or pleasure.—*McMakin's Courier, Philadelphia*.

A good clearly written book, which should be in the hands of every man who has a horse whose ill his affection or his purse make it worth while to cure.—*Bangor Mercury*.

This is a scientific, thorough and complete treatise upon the diseases to which one of the noblest of animals is subject, and the remedies which they severally require.—*Troy Daily Budget*.

It is a valuable book to those who have the care of Horses.—*Hartford Herald*.

He is not worthy to have a horse in his care, who will not use such a work to qualify himself for his duties to this animal.—*Commonwealth, Boston*.

Published by JOHN P. JEWETT & CO., Boston,
JEWETT, PROCTOR & WORTHINGTON,
Cleveland, Ohio.
For sale by all Booksellers
Sept—37

SUFFOLK PIGS.

THE SUBSCRIBERS are now prepared to receive orders for pure SUFFOLK PIGS, bred from stock imported in 1848 by the late Wm. Stickney, and by the subscribers in January. Also, an importation of 12 in October, 1853. Address JOSIAH STICKNEY, Watertown, Mass., or, ISAAC STICKNEY, Boston, Mass.

May—6t

QUINCE TREES FOR SALE.

A FEW hundred well rooted QUINCE BUSHES for sale (apple-shaped variety) at 25 cents each, or \$20 per hundred. Address
September—tf D REDMOND, Augusta, Ga.

OSIER OR BASKET WILLOW CUTTINGS.

A FEW thousand choice and vigorous cuttings of one of the best varieties (*Salix Fortiana*) for sale at \$8 to \$10 per thousand—per single hundred, \$1 50. Address
September— D REDMOND, Augusta, Ga.

OSAGE ORANGE PLANTS FOR HEDGING.

A FINE lot of my own raising; growth of present season. Also, seed for fall and winter planting, with directions to insure their growth. Address
September—tf D REDMOND, Augusta, Ga.

EXTENSIVE COLLECTION OF SELECTED ROSES AND SOUTHERN RAISED FRUIT TREES. AUGUSTA NURSERY.

F. A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also in recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camelia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE, Augusta, Ga. Nov—tf

THE SOUTHERN NURSERIES, WASHINGTON, ADAMS & O. MISS.

are now well stocked with all the varieties best adapted to the South, of FRUIT TREES and SHRUBS, VINES, STRAWBERRY PLANTS, &c.; and of ROSES and other ORNAMENTAL SHRUBS and TREES, EVERGREENS, &c., all of Southern growth, and of good size.

The packing is so carefully attended to, that Trees and Plants, Roses, cuttings for hedging, &c., are sent to all parts of the South, with scarcely a chance of their being injured.

Catalogues will be sent on application. THOMAS AFFLECK. Nov—tf

AFFLECK'S

SOUTHERN RURAL ALMANAC,

A handsome little volume, full of useful and interesting hints on RURAL AFFAIRS IN THE SOUTH. WILL BE ISSUED AS USUAL ABOUT THE FIRST OF NOVEMBER. Price 10 cents.

AFFLECK'S COTTON PLANTATION RECORD AND ACCOUNT BOOK—New Edition, now ready—No. 1, for forty hands or less, \$2 50. No. 2, for eighty hands or less, \$3 00. No. 3, for one hundred and twenty hands or less, \$3 50.

AFFLECK'S SUGAR PLANTATION RECORD AND ACCOUNT BOOKS—No. 1, for 80 hands or less, \$3 00. No. 2, for 120 hands or less, \$3 50.

These Books are now in general use amongst Planters. They will be sent by mail, prepaid and carefully enveloped at the above prices, and when five copies are ordered by clubs, and remitted for, an additional copy will be sent as commission to the individual making up the Club. Orders solicited from Booksellers and other dealers, to whom a liberal discount will be made.

B. M. NORMAN, Publisher,
14 Camp street, New Orleans.

Nov—tf

NEW AND WONDERFUL MACHINE,

WILLIAM STODDARD, PATENTE.

THE SUBSCRIBERS having purchased the right of the STATE OF LOUISIANA in the best Machine ever invented, for the purpose of rifling and shaving SHINGLES, BARREL HEADING, &c., are now prepared to sell the Right of the Parishers, at prices sufficiently low to make it an inducement to purchasers.

The Machine is simple in its construction, and not liable to get out of order, capable of splitting and shaving Two Thousand Shingles per hour, better than made by hand. It is portable and can be worked by water, steam, horse or hand power.

Large inducements are offered to persons wishing to purchase the Right of several Parishes. We will have a Machine in the city of New Orleans in a few weeks.

A. S. & A. D. HILL.

Augusta, Ga., Nov. 1854.

4t

DOWNING HILL NURSERY, ATLANTA, GA.

"Come sit under your own Vine and Fig Tree."

TWENTY THOUSAND Grafted and Budded FRUIT TREES for sale, consisting of over 200 varieties, the most extensive collection of selected Fruit Trees in the South.

No attention nor expense has been spared in getting up a variety of fruits adapted to our particular wants, soil and climate. I can assure all who want good Fruit, that I can furnish a collection equal to any to be found North or South.

The numerous applicants who failed the last season to get Trees from me in consequence of applying so late, can now be supplied, by sending in their orders early.

The numerous Rail Roads diverging from this place in almost every direction, afford great facilities for shipping packages.

Catalogues, on application, gratis. Send in your names for Catalogues. Oct—tf WM. H. THURMOND.

ACCLIMATED HOVEY'S STRAWBERRY PLANTS.

10,000 OF this noted variety of STRAWBERRY PLANTS—two years old, and warranted to bear well the next spring. Price, \$2 50 per hundred plants. Orders from the country executed with promptness and despatch. Apply to WM. HAINES, September—tf 217 Broad-st., Augusta, Ga.

CROCKER & REES,

WAREHOUSE AND COMMISSION MERCHANTS, Jackson-street below and on the opposite side of Warren's Range. The undersigned would respectfully inform their friends and former patrons that they will remove on the 1st September next to the NEW AND SUBSTANTIAL FIRE-PROOF WAREHOUSE on Jackson-street, below and on the opposite side of Warren's Range.

We will give our personal attention to all business entrusted to our care, as heretofore and hope to merit a continuance of the favor of former patrons. We are prepared to make, at all times, liberal cash advances on Produce in store.

Orders for Bagging, Rope, and Family Supplies will be carefully filled, and at the lowest market price.

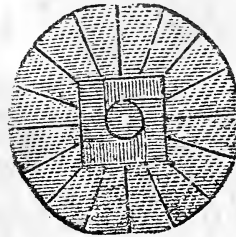
Augusta, August, 1854—6t

JOHN R. CROCKER.
JOHN C. REES.

STRAWBERRY CULTURE.

A COMPLETE MANUAL FOR THE CULTIVATION OF THE STRAWBERRY, with a description of the best varieties. Also, Notices of the Raspberry, Blackberry, Currant, Gooseberry, and Grape, with directions for their Cultivation, and the selection of the best varieties. "Every process here recommended has been proved, the plans of others tried, and the result is here given" By R. G. PARSONS, with a valuable appendix, containing the observations and experience of some of the most successful cultivators of these fruits in our country. Price 50 cents, and sent free of post—Published by C. M. SEXTON, Agricultural Book Publisher, No. 152 Fulton st., New York. Nov—tf

AUGUSTA FRENCH BURN MILL STONE MANUFACTORY.



THE SUBSCRIBER, thankful for the kind patronage heretofore extended to the late firm of SCHIRMER & WIGAND, would respectfully inform his friends and the public, that he continues to execute orders for his well known WARRANTED FRENCH BURN MILL STONES, of every desirable size, at the lowest price and shortest notice. He also furnishes ESOPUS and COLOGNE STONES, SMUT MACHINES, of various patterns, BOLTING CLOTHS, of the best brand,

CEMENT, for Millers use.

And every other article necessary in a Mill.

Also, for Planters, small GRIFFIN MILLS to attach to Gin Gears.

All orders promptly attended to. WM. R. SCHIRMER, JAL-Cly Surviving partner of Schirmer & Wigand.

WM. ALLSTON GOURDIN,

FACTOR AND COMMISSION MERCHANT,

CORNER East Bay-Street and North Commercial Wharf, Charleston, S. C., is prepared to make liberal advances on consignments of COTTON, CORN, SUGAR, FLOUR, GRAIN, HAY, &c.

Genuine Peruvian Guano Depot!

FARMERS' PLASTER, CHARCOAL, BONE DUST, MINERAL PHOSPHATE LIME, SUPER PHOSPHATE LIME, &c. Always on hand. Sept. '54 1y

CHEROKEE!

A VALUABLE LOT OF LAND FOR SALE.

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POOL OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this Lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIME-STONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

*For terms, &c., apply to the subscriber, or to Col. J. W. M. BERRIEN, of Rome, Ga., who will take pleasure in pointing out the land. D. REDMOND, September—tf Augusta, Ga.

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1855! SOUTHERN CULTIVATOR, 1855!

A MONTHLY JOURNAL,

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE
Horticulture, Stock Breeding, Poultry, Bees, General Farm Economy, &c., &c.

Illustrated with Numerous Elegant Engravings.

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DANIEL LEE, M. D., Editor.

D. REDMOND, Corresponding Editor.

The Thirteenth Volume will commence in January, 1855.

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Sept tf

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., FEBRUARY, 1855.

NO. 2.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS

Plantation Economy and Miscellany.

PROFITS AND WASTES OF AGRICULTURE.

AGRICULTURE has no principles nor practices that better deserve the most searching investigation than its *profits* and its *wastes*. It is not an easy task to measure the precise profits which accrue from any given amount of capital and labor employed in tillage or husbandry, but with due preliminary care in keeping farm accounts, one may approximate exactness in this business pursuit as in all others. The main difficulty lies in habits of carelessness and indifference in matters of debt and credit as they affect rural affairs. Where all the other elements of profit and loss are fully estimated, there still remains an unsettled account with the soil in point of loss or gain of the raw material of crops, which is most difficult of adjustment. Cultivated land often shows a temporary improvement from deeper plowing, or finer tilth, yielding larger harvests for a few years, to be followed by a more thorough exhaustion in the end, from constant neglect to make adequate restitution. Profits thus attained are exceedingly deceptive; for they are realized in a large degree by the perhaps unconscious consumption of capital in the soil. The fact cannot be too often nor too earnestly pressed upon public attention, that the cultivator never produces a single plant of any kind from air and water alone. In the growth of plants there are elements of an earthy nature consumed and wasted away, which must be restored again, to perpetuate Nature's even balance between soil and its fruits. If such were not the fact, then all manuring would, obviously, be unnecessary, and the gradual impoverishment of tilled land an impossibility. When a railroad company or a bank makes large dividends and apparent profits, either by borrowing money or infringing in any other way upon its capital, the transaction is deemed disreputable, and sometimes punished as a fraud upon creditors and innocent stockholders. It would be wise to extend this high moral principle, so important to the rights of property and the good of the community, to all our dealings with mother Earth. All her accountable children have equal rights from generation to generation, in and to her natural fertility. To deny this is to cancel all obligations of man to his offspring—all claims of posterity to plow, plant, and reap as fruitful fields as their fathers did. If it be the order of Providence and a law of our race, to multiply and increase its numbers, then there is a corresponding obligation to augment the fertility of land, that it may both feed and clothe this providential increase of human beings. To diminish the fertility of

land, and at the same time augment the number of men, women and children to subsist on its products, is a moral defect as obvious as it is prevalent. We do not like, in our editorial capacity, to pronounce any common practice sinful; but our convictions on this point are so clear, and our sense of its injustice so deep, that we hope to be pardoned, if it be a little out of place to urge the wickedness of seeking wealth by seizing and selling the natural capacity of the soil to support mankind. Where a man creates fertility, he may rightfully sell it again as the legitimate fruits of his industry. But the natural resources of arable lands cannot be innocently dried up, simply because the act is at war with the best and the highest interests of society. Profits thus attained are both ephemeral and partial—sometimes shining, but always empty bubbles that float awhile upon the stream of time, and are gone forever.

To prove beyond cavil that Providence punishes this great wrong done to mankind, attention is invited to a few statistics drawn from the practice of agriculture in Massachusetts. In an address delivered before the Housatonic Agricultural Society, by ex-Governor BOWWELL, last autumn, and published at length in the December number of *Hunt's Merchant's Magazine*, in which the statistics, profits and wastes of tillage and husbandry in that State are discussed with uncommon talent, accuracy and power, he says, "Massachusetts is now more than two hundred years old; in all her history, she has been blest by an enterprising, industrious population; yet the aggregate accumulation of these two centuries of labor and economy is only six hundred dollars for each person. Three years of non-production would make her poorer than she was the day the May Flower first gave herself to the icy gales of our coast."

That the surplus earnings of a most ingenious, intelligent, money-saving people, drawing largely from their fishing and commercial resources, as well as from manufactures and agriculture, should only be equal to three years' support after two hundred years' labor and economy, is a curious and pregnant fact. According to the census of 1850, there were 55,082 farmers in that State, who had an average of 38 3/4 acres each in tillage, meadows and pasturage. It would occupy more room than we can well spare, to enter at length into a critical analysis of the official returns by which Gov. B. proves that the profits of capital and labor employed in agriculture in the old Bay State do not exceed *two per cent. per annum*. His "conclusion" is thus stated: "The conclusion from these facts is, that the net income on the agricultural capital of the State does not exceed two per cent. This is an unsatisfactory result, and if it is a necessary one, the sooner our young farmers emigrate, the better for them."

They do emigrate by thousands, carrying not a little of the cream of the soil converted into land-office money with them. Good home markets for all the products of agriculture and horticulture, aided by a perfect net-work of railroads, do not suffice in Massachusetts either to improve the land, or enrich the people who own and cultivate it. There is a fundamental error in their system of farm economy, and in their universal neglect of agricultural education. We entirely agree with Mr. BOUTWELL when he says: "If the depression of which we have spoken is unavoidable and permanent, then this interest *is without hope* in New England, and we must await the conclusion of a process fraught with ruin, not only to agriculture, but to other branches of industry."

The "Wastes of Agriculture" in Massachusetts are not unlike those in all the other States; and as they are pointed out with equal truthfulness and spirit in the addresses before us, we place so much of it on record in these pages for future reference as relates to this topic:

"I. FARMERS CULTIVATE TOO MUCH LAND. This observation is old, for it is so true, and its truth is so apparent, that it must needs be old. For the reason that the manufacturer economizes his power of water of steam, or the trader his capital by diminishing his credits, or the merchant his voyages by increasing the speed of his vessels, the farmer should limit the amount of land in cultivation as far as practicable. It is true to an extent much beyond the common opinion, that the cost of a crop per ton or per bushel is diminished as the aggregate per acre is increased. That is to say, a bushel of corn at twenty per acre costs more than a bushel at eighty. The same observation is true of every product of the land. The agriculture of Massachusetts from 1840 to 1850 was a process of deterioration and exhaustion. It was altogether a retrograde movement, and the lessening crop per acre, year by year, was so serious as to threaten the existence of the interest. It is to be hoped that the present decennial period will show a better result. In the year 1850, we cultivated 2,133,436 acres, and allowing one acre for twenty bushels of wheat, for fifteen bushels of rye, for sixty of corn, for forty of oats, for one hundred and fifty of potatoes, for thirty of barley, for one and a half tons of hay, for one hundred dollars' worth of orchard products, for two hundred dollars' worth of garden products, and seven acres for the pasturage of every horse, five acres for every ox, four for every cow, two acres for each young cattle, one acre for each sheep, and allowing liberally for other crops and uses, the product of that year ought to have been obtained from 1,772,581 acres, showing a loss of the use of 360,855 acres, equal to about 17 per cent. of the land in cultivation. This loss is obtained upon the foregoing calculation of crops, but as I shall have occasion to say hereafter, the loss will appear much greater if compared with the returns of 1840, when the actual results exceeded the estimate I have now made.

"The first waste to be pointed out is the use of this large quantity of land, which, if allowed to run to wood merely, would yield an annual average of one cord per acre, or 360,000 cords per annum. If this wood be estimated at one dollar and fifty cents per cord, you have an annual loss or waste of \$540,000. In the next place, this great quantity of land would be much benefited by allowing it to lie idle, for it is a general rule that nature yields a growth and improves the land at the same time, while what often passes for husbandry leaves the land poorer than it finds it. Now, then, let this area of land rest for forty years untouched by the hand of man, and it will yield an aggregate of twenty millions of dollars, while its productive power for the future will be greatly increased.

"II. As a consequence of this system, the farmers of Massachusetts fence, plow, sow and mow six acres, when they ought to fence, plow, sow and mow but five; and in

fine, they extend all their agricultural operations over 17 per cent. more land than is necessary to the result they attain. Here is a manifest loss of labor—a waste where there ought to be the strictest economy. It may not be easy to estimate this waste accurately, but it is plain that it materially diminishes the profits of this branch of industry. We have already estimated the entire cost of our agricultural labor at sixteen and a half millions of dollars. It is moderate to say that one-eighth of this is wasted in the cultivation of 17 per cent. more land than is necessary to the crop; but to avoid any unreasonable calculations, it may be well to put the loss at one-sixteenth, or one million of dollars. Be it remembered that the gross proceeds of agriculture do not exceed twenty millions of dollars, and of this at least one million is wasted in the misapplication of labor. Nor is this all. We shall have occasion to say that this misapplication of labor is followed by a more serious loss in the exhaustion of the land. But what would be said of a manufacturer who should be guilty of wasting one-twentieth of his whole product in the application of his labor? If his labors finally resulted in bankruptcy, would he be entitled to public sympathy? Or would judicious men condemn the business because it failed in such hands? It is a duty to economize labor. Labor is the scarcest and dearest commodity in the market, and so it is likely to continue.

"III. This waste of labor is followed by a waste of land. When we cultivate more land than we ought for the crop we get, the process of cultivation is necessarily defective and bad. This was the character of our farming through the whole of the last decennial period. As the land under bad cultivation loses heart and strength, more and more is required to meet the demand we make. So then, from 1840 to 1850 we not only cultivated more land than we ought, but we actually consumed it at the rate of many thousand acres a year. The produce of 1840 was much greater than that of 1850, yet we had 2,133,436 acres in cultivation at the latter period, and only 1,875,211 acres at the former. The product of 1840, at the rates before named, would have required 2,317,696 acres, while they were really produced from 1,875,211 acres, showing that my estimate of the capacity of our soil under ordinary care was too low. If you take the excess of the crop of 1840 over that of 1850, and according to the rates before named, find the quantity of land necessary to produce that excess, and add that quantity to the acres in cultivation in 1850, and you have 2,507,353 acres, or 632,142 acres more than were cultivated in 1840. These statistics demonstrate two facts—one absolutely and the other approximately. First, that during the last decennial period, our lands continually depreciated in productive power; and secondly, that that depreciation was equivalent to the annihilation of 63,000 acres of land a year, or nearly three per cent. of the value of the farms of the State, exclusive of buildings and woodland.

"In fine, it appears that in 1850 we were cultivating 632,142 acres more than we should have been, if the production of 1840 had been sustained; 360,855 acres more than would have been necessary at the rates before assumed; and also that the impoverishing culture from 1840 to 1850 was equal to an annual waste of 63,214 acres, which was apparent in the diminished total product, and in the increased quantity of land in use. This waste may be estimated with considerable accuracy. The farms of the State were valued at \$109,076,377. Two and nine-tenths of 1 per cent, the exact proportion which the annual waste bore to the quantity in cultivation, is \$3,163,145. But if you allow that one-half of the total value of our farms is in woodland and buildings, the depreciation was \$1,581,572 per annum. But whatever may have been the exact depreciation, it is plain that our culture from 1840 to 1850 was an exhausting one—the

acres continually increasing and the production diminishing. These facts demonstrate what it is unpleasant to believe, and yet more unpleasant to say, that the farmers of Massachusetts, of that period, could not as a class be called good farmers. Good culture benefits land—bad culture exhausts it.

"During the ten years to which our statistics refer, the culture of the State was bad. Land reclaimed from the water and the forest was not used to increase production, but its native fertility was required to supply those crops which our exhausted and abused fields refused to furnish. The process of our agriculture was that of a corporation which uses its capital in dividends, or of a merchant who lives beyond his means, and it tended to the same result—bankruptcy. The idea that cropping land necessarily exhausts it is an erroneous one, and it is, moreover, a reflection upon the Creator, who has provided for the support of his children, and not for their extinction by the exhaustion of the powers of nature.

"I beg, in concluding this part of my address, to present an aggregate of the wastes to which I have already called your attention:

1st. The annual income from the growth of wood on 360,855 acres of land more than was necessary to the crop of 1850.....	\$ 540,000
2d. Loss of labor in cultivating this excess of land.....	1,000,600
3d. Loss of land per year by exhausting culture.....	1,581,572
Total.....	\$3,121,572

It has often been a theme of reproach to Southern agricultural labor, that it impoverishes the soil on which it operates; but we doubt whether the same number of operatives south of Mason and Dixon's line damage the land over \$3,121,572 a year. After carefully studying this important question for years in both the slaveholding and non-slaveholding States, we became satisfied that the relations subsisting between employers and employed in any quarter of the Union, had little or nothing to do with it. Being mainly a scientific problem, the popular understanding, both North and South, will fail to solve it, and act as wisdom dictates, so long as the scientific principles of agriculture are disregarded in the common school education of the sons and daughters of American farmers.

"As the twig is bent the tree is inclined."

One looks in vain into our most cherished institutions of learning for a single text book, designed to teach the true balance of Organic Nature, between cultivated plants and cultivated animals, and between both and the land that supports them. Nothing about the starving of plants and animals by the exhaustion of fertility and the killing of land, commands the patronage of Congress and of State Legislatures. Not one of these bodies has ever given a dollar, to our knowledge, to found an agricultural school of any kind. L.

SYSTEM AND ROTATION IN COTTON CULTURE.

THE object of this article is to show that some such system as this, producing the same results, is essential to the renovation of our already exhausted fields—to retain and improve the productive quality of our new lands, and to secure at the same time the raising at home of sufficient provisions, with plantation teams, enabling us entirely within ourselves to carry forward the prosperous production of our cotton. In every other section of this country, North, East, and West, the proceeds of the productive industry of the people, in the grand aggregate, are retained at home, while we, the planters of the South, producing annually, from a single one of our crops, \$150,000,000, pay out the grand aggregate to others

for bread, bacon and mules, all of which we may, under a proper system of plantation economy, grow at home, and thus we may retain at home also this large sum of gold, the substance of our fields, to be expended in home improvements.

It is an entirely fallacious political economy that supposes for a moment, that we are to make so much cotton annually, at the sacrifice of our personal and national interest; and it is as equally fallacious to argue, as many do, that it is our true policy to buy bread, bacon and mules of others—though we may be able to raise them—that they may be induced to buy our cotton. There are other arguments for this ruinous policy too frivolous to detain you with.

Now, I insist upon it boldly, that this whole barter policy is at fault. It is one of dependence and slavishness. With a climate and soil peculiarly adapted to the production of cotton, our country is also equally favorable to the production of all the necessary cereals, and as remarkably favorable to the perfect development of the animal economy, in fine horses, fine active mules, good milch cattle, superior sheep, and fat hogs, and for fruit of every variety (not tropical) it is eminently superior. If this condition of things be fact, and I assert it to be such, why is it that we find so many wealthy cotton planters, whose riches consist entirely of their slaves and worn out plantations? I desire to show, and I shall prove it in practice, that a judiciously arranged system of plantation economy will secure upon the plantation sufficient grain, bacon, and mules to supply its wants; and a cotton crop, unencumbered by these absolute necessities, that will realize a handsome dividend upon the capital and labor of the planter. In this cycle of rotation and shift of crops that I practice, there is afforded, in the first place, every necessary means for improving the fertility of the land. Another striking feature about it, and not the least commendatory of it, is the amount of rich pasturage that it affords for stock. I regard this as among its highest recommendations. Stock cannot be raised successfully or advantageously without pasturage in addition to well filled cribs of grain. This crop should always be laid by early, and peas, the common cow-pea, or some of its varieties, sowed broadcast over the land and ploughed or harrowed in, which adds very materially to the value of the pasturage, as well as improves the condition of the land. It is argued by planters generally that grazing land injures it more than the stock are benefited by the pasturage. The argument is too often illegitimate. The land is first ruined by the one-crop practice of cotton, cotton, &c., till the vegetable mould and inorganic salts of the surface and plowed soil are exhausted, it is then turned out to pasture. It soon runs together, of course, produces little grass, and sustains poor stock. The difficulty is not so much in the injury which the hungry stock did in grazing the pasture, as the ruinous system of culture that prevented any pasture at all. Land under an improving system of culture is not thus affected. Rich land, upon which water is not permitted to run, whether naturally rich or made so by art, furnishes a wilderness of grazing, when turned to pasturage, which not only greatly improves the condition of the stock, but retains a sufficiency of refused vegetable matter, which after the plow, keeps up the loose and friable condition of the land. It is in this view of the subject, that we see this a self-sustaining system of plantation economy. Under this system, or any one like it, furnishing the amount and value of pasturage that it does, the raising and keeping of stock, mules, hogs, and cattle necessary to supply the wants of the plantation, become a source of absolute profit—the land is made rich and continues improving in the production of the elements of fertility—the compost manure is made valuable, because it is trod up and mixed with the excrements of

stock kept fat on rich pasturage. This rich compost manure, applied to the land once every four years, in quantities sufficient to make a bale of cotton per acre, continues to improve the land, and thus increases annually the grain crops and pasturage. All this is simple, plain and practical.

It is objected to in this country by planters and others taking their cue from them, on account of its "short bite" and sterile pasturage, as they are pleased to call it. Nor has there been a designed misrepresentation in this; it is the result of observation, derived from the working of this universally draining system of growing cotton. Now the facts which my practice and observation under this system have demonstrated, are these; that no country is equal to this for good and "long nip" pasturage. Our climate is remarkably favorable to rich and luxuriant pasturage. The red man of the forest, and the pioneer white man that came here in advance of our "scratching plows," tell us they found the wild oats and native grasses waving thick, as high as a man's head, and so entwined with the wild pea vine as to make it difficult to ride among it, all over this country. Every cotton planter has heard of these fine primitive pastures, and many have seen them. If the country or the climate has been cursed in our appearance as planters here, it has been in the wasting system that we introduced and continue to practice. There is no grass, or a hay pasturage, superior to our crab grass, a native to the "manor born." Up by the first of April, and continues green and growing (when properly managed) throughout the summer and fall till frost. The land once set with it never requires seeding again. Our crow-foot is also a most invaluable summer and fall grass. The short and extreme mildness of our winters, with the various evergreen or winter grasses, in connection with red clover, rye and barley for winter and early spring grazing, enable us to keep stock throughout the winter cheaper than farmers can in higher latitudes.

Under a system affording such facilities for grain in abundance, rich and extensive pasturage, with fat, home raised stock of every variety, and land improving annually in fertility, the culture of cotton becomes a process of gardening, productive and remunerating. The land may always be wrought to the best advantage, without injury at any time to either crop or soil.

Again: Cotton thus treated matures earlier, feeds and fruits more rapidly, being strong and healthy, and less affected by insects, lice, rust, or the worm. Of course, then, it opens earlier, and may be gathered to better advantage and in better order. It also affords a greater degree of certainty for a fair crop, both to the land and hand. This is the result of causes both legitimate and philosophical; first, the land is provided with the food in proper form and quantity which the cotton plant requires to bring it early to maturity; again, there is time and opportunity afforded to prepare the land for the reception of the seed, and the mode of seeding also requires a stand, perfect, regular and uniform throughout; by perfect, I mean the mathematical arrangement by which the hills or stalks of cotton are so placed on the land as to feed equally, grow uniformly, and at maturity fill up the land completely.

DR. CLOUD.

VINEYARDS IN THE SOUTH—"A WORD TO THE WISE."

MESSRS. EDITORS—The almost daily accounts we receive of the destruction of wine crops in Europe, and of the partial, and, in many instances, total annihilation of the vineyards by an exterminating disease, cannot fail to suggest many serious thoughts as to the influence this may have upon society in this and other countries. The supply bids fair to be diminished fifty or a hundred per cent., while the demand has been increasing latterly at an

almost equal ratio. The consequences will, of course, be much higher prices, greater adulteration, and greater consumption of spirituous liquors. What the ill effects of the two last consequences will be, I leave to Physicians and to Moralists to discuss and to combat as well as they can.

To us belongs the first of the three evils which may indeed be considered as the immediate cause or parent of the others. It is the business of the owners of the soil to grapple it, and in combatting it to benefit themselves, their country and the world at large; in other words to turn the evil itself into a source of good.

Let us speak plainly, first to the Farmer and Planter and then to other classes of Society.

Cultivators of the land, (would we say,) what are you toiling for? For the comfort of yourselves and family? For comfort you raise hogs, chickens, cows, vegetables, etc., all of which require a certain amount of labor and trouble; most of you even have a few fruit trees; and then you plant vast fields of corn and cotton; to enable you to enjoy comforts or luxuries which you cannot raise at home. All this is very well; but let me request you to lay aside the poorest corner of your corn or cotton field (provided it be dry land.) Procure cuttings or roots of some approved vines, and plant yourself out a vineyard. After it is planted, it will give you very little more trouble than an acre of corn or cotton; and only think of the amount of enjoyment it will afford you; an abundance of delicious and wholesome fruit will grace your table, and the charming bright juice will give pleasure and health to your little ones and your "better half;" for be sure they will enjoy it after a while. And do not forget that if once your boys learn to love good wine they will never take to whiskey—they will despise it!

Many of you are, perhaps, deterred from the experiment by some fancied ideas of great difficulties in the way. Let me assure that vine culture is the easiest thing in the world; any of your sons, or your field negroes will "take to it" in one season; the pruning can be learned in ten minutes; the working is simply hoeing, light plowing and tying of branches. The making of the wine and its subsequent management require some attention. (Can you make good bacon without care and attention?) All this can and will be explained to your satisfaction. Only do not let the fear of difficulties prevent you from making the experiment on one acre; the outlay is not as much as you would give for a milch cow or a second-hand buggy! An acre should yield, at the very least, 300 gallons of wine, which, at the lowest price, is worth \$1.25 or \$2 per gallon; say \$1 (to be within the mark.) One hand can attend five acres; here you have \$1500 for that one hand. You may say that this is all "paper calculation;" it certainly is; but experience proves that many have realized more than that amount—it has been made, and it can be made. Have the energy to try it.

Now, to merchants and other men of business in cities, I would say: You spend, every summer, vast sums of money in search of health and pleasure for yourselves and families. You go North where you lavish your money among men who hate you, who insult you, who would (but let us not indulge in politics.) Finally, you travel all summer, undergo great fatigue, experience many provocations, enjoy very little pleasure, (if the truth be told,) and have spent more than you had anticipated. All this is of yearly occurrence, and I doubt not, many would be rejoiced to find some more rational mode of passing time, and of improving their health with less expense. I here propose another plan, which, I hope, will be viewed in a favorable light, and acted upon by some. In one of the most healthy regions of the world, extending along the line of the South Carolina Railroad, from Williston, (105 miles from Charleston) to the Graniteville Station, a few

miles further than Aiken, lies a considerable extent of broken land, the principal growth of which is the noble Pine, intermixed with the stunted Scrub Oak and Black-jack, with occasionally some Hickory and other trees. I will speak at present only of that narrow strip from fifteen to twenty miles in length, most easily accessible from the Railroad. It is a part of a vast plateau, extending over a portion of our State, and I believe of Georgia, at an elevation of from 500 to 800 feet above the level of the sea; being just at that particular height where the miasma and the damp and heavy atmosphere of the lower country, so fatal to health and so destructive to the lungs, can not possibly ascend, and where the air has not yet acquired that degree of rarefaction and that keenness, fatal to those having already the germ of consumption. I need say nothing more of its climate; it is of world-wide celebrity. This plateau is, in many places, very much broken; it is intersected and crossed by valleys (formerly the beds of deep rivers) varying in depth and in width; sometimes with high, steep and rugged embankments, often crowned with huge masses of Granite or Burr Stone thrown up, and then rent asunder by some terrible convulsion of Nature, and threatening destruction to all beneath, and at other times gradually sloping to the bottom, where a gentle rivulet wends its quiet and shaded way to some mightier stream.

The quality of the soil there varies as much as its surface; the bottom of the valley is often very rich, and when well cultivated will yield abundant crops of grain, potatoes, etc. The unbroken lands or levels are of a very fair quality; and all who have ever tried the experiment will certify to the fact that they improve very rapidly by proper management and a free use of manure, the good effects of which they will retain for several years.

Now, Mr. Merchant, go and purchase a small farm, say from 100 to 200 acres, even smaller if your means are limited; you can buy land for from \$2.50 to \$5 per acre; build yourself a comfortable cottage (lumber is cheap and plentiful.) Put on your farm an old negro to plant your vegetables and gather your fruit; his wife to raise your chickens and your pigs, and to take care of your dairy; his son to attend to your vineyard, and some little ones to run about. This will form the capital you are to invest.

You generally wish to get your children out of the heated and dusty city by the middle of July. Take them up to your farm; give them a run in your orchards in search of fruit and rosy cheeks; buy you a season ticket on the Railroad, and come up every week to enjoy their innocent pleasures and improvement. The trip will be an immense benefit to you, and with renewed health and strength you will resume your winter business with more energy, and they their studies with more pleasure and success. Your orchard and garden will supply your table and your friend's table with choice fruit and vegetables; and your investment will not be dead capital on your hands.

A vineyard of six acres will yield you, at the end of 3 or 4 years, an interest of 50 or 100 per cent. Be not sceptical as to the quality of the wine. This is no more a problem! it is practically proved that wine of first quality can be made in large quantities; keeps as well as Madeira, and this without the addition of spirits. Why, this is the finest country in the world for wine! and should the grape disease continue its ravages in the old countries as there is every reason to suppose it will, we shall have to supply not only America, but Europe also. Good, pure, wholesome juice of the grape will always command a fair price; we need not dread competition, for the more of us will become wine-growers, the more will we improve in the manufactory, and the greater will be the demand for home consumption.

It does not require a great stretch of imagination to

fancy our piney woods transformed into vineyards, and this entire section studded with neat cottages (if not chateaux) each sending to market from 50 to 100 barrels of their own particular and renowned brand, dry, sweet or sparkling. We have all in our favor; everything to encourage us in this enterprise; it promotes morality and temperance more than any other measure yet suggested; it improves and enriches the country; it conduces to health and comfort; is a highly profitable and an agreeable employment for any man; requires but a very small outlay, and would ruin no one, even should the experiment be a failure.

Why not try it?

Tell me not that your business would not allow you to devote sufficient time to it! Six weeks in summer when there is nothing doing in your cities, will more than suffice to gather and press your fruit; one week in winter to draw your wine, and occasionally a visit to see that all is going on right.

I again repeat, try it, and you will never repent.

A. C.

South Carolina, 1855.

REMARKS.—We thank the author for the foregoing very suggestive article, and fully endorse his views of the ultimate profit of Vine Culture in the South. If grape-growing can be made remunerative at the North and West, it surely must prove doubly so in our more genial clime. A correspondent of the *Country Gentleman*, from Naples, Ontario county, New York, gives a case of an acre of ground planted with Isabella Grapes, which in the season of 1853, yielded to the value of \$800 worth by actual sales. During the season of 1854, the product was ten tons of fruit, which, at six cents per pound, would amount to \$1200. The cost of tending and picking, he estimates at not more than \$400, which would leave a clean profit of \$800, for one acre of land. The viney is situated at the base of a hill, in a valley sheltered from winds, has a sandy, gravelly soil, and is highly manured. Between the rows of the grapes, potatoes and other vegetables are usually planted.

The *Ohio Farmer*, of a late date, also gives us the following:

"LARGE YIELD OF GRAPES.—Charles Carpenter, of Kelley's Island, one of the most successful cultivators of grapes in this country, from a single acre of his own growing, last season, expressed 800 gallons of juice, making 700 gallons of wine. Besides this he sold \$100 worth of grapes, and his family and some fifteen hands ate all they chose during the season. This single acre yielded at least \$1200, and it was the poorest season they have ever had at the Island for grapes."

And a letter from a Kentucky wine-grower is published in the last number of *Pulnam's Magazine*, in which the writer states:

"Wine can be made in Kentucky as cheap as in Germany or in France; it can be made as cheap as cider, and at 15 cents a gallon it will pay better than any of our staple productions—and now for the proof. Say that an acre of vines will average 400 gallons; 400 gallons of wine at 15 cents is \$60.

"An acre of our land in hemp will average 600 weight, which at \$5 per hundred is \$30, leaving a balance in favor of the vineyard of \$30, or 100 per cent.

"One acre of corn will average 50 bushels, say at 30 cents per bushel, \$15—leaving a balance of \$45, or 150 per cent in favor of the vineyard.

"The expenses of establishing a vineyard will be balanced by the cost of seeds of hemp and corn sown annually, making all things equal in that respect. The tillage of the vineyard and making wine is not so laborious or ex-

pensive as that of corn or hemp. If we could get \$1 per gallon for wine ready for market, or 50 cents at the press, what a source of wealth it would be. Only think of 100 acres in vineyard, the products at 50 cents per gallon, amounts to \$20,000 per annum. A man having five acres, which he could manure himself, would find them more profitable than a Kentucky farm of 200 acres, with three negroes to cultivate it."

All this is very conclusive as to the profits of Grape Culture, and here we rest the question for the present.—
EDS. SO. CULT.

LETTER FROM DR. TERRELL, TO THE EXECUTIVE COMMITTEE OF THE SOUTHERN CENTRAL AGRICULTURAL SOCIETY.

[Published by order of the Society.]

GENTLEMEN:—As my health is so very bad that it is not possible for me to meet you at the Fair, and as I fear it is not likely to be any better, I think it my duty to offer you my resignation as a member of your body.

Gentlemen, I pray you never to give up the earnest prosecution of your noble enterprise—"The Improvement of Southern Agriculture." There are not seven millions of people who live, or ever did live, that *may* exert such an influence on the affairs of the world, by peaceful means, as the inhabitants of the Southern States. The labor of their work-people produces an annual surplus of one hundred and twenty millions worth of exchangeable products, which furnishes the means of the great commercial operations of the United States.

It is your interest, it is your duty, and ought to be your pride, to take care of such a patrimony as that left you by your revolutionary ancestors. Then, let the Southern people, as one great family, never halt in this common enterprise, until they have not only put their lands in a condition to be preserved, but improved by cultivation. The above address being directed to the Southern States, might seem to be of a sectional character, and intended to disturb the harmony of the Union; such, however, is not the fact, but directly the contrary. If the Cotton, Rice, and Tobacco-growing States should so improve the present cultivated lands, as to increase their products even ten per cent., will it not be perceived by everybody that the resources of the country will be, to that extent increased, and that the means of Commerce, Agriculture, and all the Industrial Arts, which constitute the wealth of nations, will equally share the benefit; and so in proportion as you increase your surplus exportable products will your wealth and power increase.

A political economist, who may attempt to give direction to the leading policy of a nation, and who fails to understand the permanent sources of its wealth, whether agricultural, manufacturing, or commercial, cannot possibly succeed in giving it its greatest security, or the best means to its inhabitants of providing for their necessities and comforts.

That we may understand something of the position which the United States occupy, in regard to the permanent sources of her wealth, we will refer in a general way to the five leading powers of Europe, probably the most stable, and certainly the most powerful. In France the sources of permanent wealth are wine, silk, oil, wheat and other grains. England, the productions of her cotton, linen, wool and iron manufactories. Austria, chiefly agricultural. Prussia, agricultural. Russia, all descriptions of agricultural products—wheat and other grains, hemp, flax, &c. In the United States, besides Indian Corn and other breadstuffs, we have, as before observed, one hundred and twenty millions worth of products available for export or exchange; and here, let it be remembered, once for all, that the single article of Cotton, of which it is be-

lieved that three millions of bales will be required by the markets of the world, to be furnished from the United States, cannot be obtained anywhere else. This single article, and the business connected with its manufacture, furnish the means of life to many thousands in England and other parts of Europe, who would otherwise perish.

But we are charged with producing these articles, cotton, rice, and tobacco, (of such great value and indispensable importance to an advancing civilization,) by slave labor.

We admit it to be in part true, for notwithstanding the three millions of slaves, much white labor is appropriated to the production of cotton and tobacco. But the great charge of compulsory labor, against the institution of American Slavery, upon which our foreign and domestic enemies delight to dwell, we do not attempt to palliate; but, indeed, boast, that with the descendants of a race of barbarians, whom the English bought with rum and calico, on the coast of Africa, or captured by armed bands and brought as slaves to their (then) colonies, or which were obtained by the same means, in the same country, and sold to us by the people of Salem, Boston, Providence, New York and Philadelphia, after the revolution—we have made good laborers and good Christians; a race whose ancestors, for twenty-five centuries, were barbarians and contributed nothing to the promotion of civilization or Christianity. But we are told that since their labor is so valuable, we should set them free without lands, or houses, or food, and pay them for their labor; this is all absurd—the African man does not voluntarily work steadily or continuously at anything, nor ever did, as is proven by his present barbarous condition and the history of his race for twenty-five centuries.

But we are moreover told that *free* is cheaper than *slave* labor; let us inquire, for a moment, how the case stands between the free labor of Europe and slave labor of the Southern States, and whether it is not that the slave is better paid for his labor, than the free laborer in Europe. The price of labor in Europe in the different currencies, differs a good deal, but the result is about the same. From the daily wages of the laborer, he must save enough to buy his clothes—he must have something like bedding—a place to lodge—and he must have his clothes washed and mended, which leaves him enough, and only enough to buy him from a pound to a pound and a-half of bread a day, and sometimes a mug of ale; this is all he expects, and as a rule, all he receives. Now the slave must have, at least, half a pound of meat a day, and a pound and a half of bread, to which may be added sweet potatoes, peas, turnips, collards and milk; he must have his house, his clothes, bedding, fire-wood, physician and nurse in case of sickness, sugar, coffee, &c., while sick; he must have a small allotment of land to make something for himself, or instead his master makes him a gratuity in money at the end of the year. He would, indeed, be a costly laborer, if the things he consumes were bought in market, but the slaves, besides the staple crop, make their own bread and meat, and whatever vegetables may be needed.

The slaveholder has been so constantly misrepresented and so grossly abused, that it is believed it may be useful to give a minute statement of the general condition of slaves, that ignorance may no longer be an excuse for misrepresentation. It is often asked, by way of reproach, do you mean to perpetuate slavery in the United States? This is a question upon which we can make no sensible answer, and have nothing to say. We mean at present to keep them in a state of servitude, and to provide for their wants. Whenever the time comes that their labor is not needed, or may be superseded by other labor, He who permitted their introduction among us will provide for their removal, and use the ways and means best suited to His great purpose. The populations in all Europe are

disposed to heap abuse on American slavery, and to boast that they have no such thing as slavery. Let us inquire for a moment if this is true. In passing through the towns in England, you will, in different streets or stations, observe a soldier with a musket or bayonet, standing, or walking a few steps to and fro, day and night; now this is only one of fifty thousand, whose duty it is to obey orders as a slave obeys them, without being allowed the least discretion or liberty.

He cannot leave his post or barrack, or be absent on the most urgent occasion, without permission. There are many laborers, mechanics and manufacturers, who think they do not receive a just compensation for their labor. This man of the bayonet informs them by his presence that they had better be quiet and earn their wages; this man is not only a slave himself all his life, to a despotic law administered by a despotic officer of almost unlimited power, but is willingly employed to suppress every act of the people that indicates liberty and freedom of opinion. Let it be remembered here, that the labor of every man and woman who earns bread, is required to furnish the means of his subsistence and clothing. Now, whatever is true in England of the military surveillance of the people, is especially true in France, Austria, Prussia and Russia; we will therefore inquire how many of these defenders of liberty and the people's rights each of the five powers own. We will set down England at 50,000 for the island; 500,000 India and the colonies; France, 500,000; Austria 500,000; Prussia, 121,000 and Russia, 700,000. Added together you thus have a standing army of 2,370,000 slaves, who are not only absolute slaves themselves, but willing to keep others in the same condition.

But if the Southern States require anything to stimulate them in their great enterprise, let them look at Spain. Two or three centuries ago, the most wealthy and powerful nation in Europe; her agriculture neglected, she has now no surplus to send abroad, save a little wine and fruit. Let them look at Turkey. At one time so powerful as to threaten the overthrow of Western Europe; now so poor as to have no resources for the defence of her national existence. Her fields are exhausted and worn out by neglect and bad tillage; she has nothing to export but figs, some fruits and oil, and some of the light wines of the islands of the Grecian archipelago. To conclude this most unsatisfactory address, let the Southern people keep before their eyes the fact that there are no worn out lands in England, France, Prussia, Belgium, Holland or Switzerland, and that these are the strong and stable nations of Europe.

I am, gentlemen, most respectfully,
your friend and servant,
WM. TERRELL.

Sparta, Ga., Dec., 1854.

BUTTER AND LARD.

SOME very fine samples of Butter and Lard were exhibited at our late Fair, by a lady friend of Tennessee, whose husband has obligingly furnished us with the following directions for making these indispensable household articles:

"The butter is six months old. It was churned as it is usually done; the milk washed out of it, then salted and set away in the spring house until the next day, when, with a wooden paddle, all the water is worked out; set it in the spring house again for several days, when it is again worked, and one ounce* of pulverized loaf sugar is added to each pound of butter; then put into a stone jar, laying a cloth over it, and salt on the cloth, and set in the spring-house, where it may be kept through the summer.

The Lard was soaked for twelve hours in water and then thoroughly washed in tepid (warm) water; it is then

rendered by cooking it until the cracklins are beginning to brown; It is then nicely strained and set away in a cool cellar."

*REMARKS.—One-half or one-quarter of an ounce of the sugar would, we think, be sufficient. It should be rubbed up or intimately mixed with the salt before using. The sample sent by our friend was, in all respects, superior; only that the taste of the sugar was too perceptible. The Lard was equal to any we have ever seen. We have, also, just received from New York the following recipe for making the somewhat famous "DUTCH BUTTER," said to possess great richness and to keep one or two years. It is held as a secret and the recipe sold, but it will be seen that it differs very little from the plan pursued by Mrs. LENOIR. Both are worth trying:

TO MAKE DUTCH BUTTER.

1st. Be sure to work out all the butter-milk.

2d. To each table-spoonful of salt, put a teaspoonful of powdered sugar, and to every 5 lbs. put a teaspoonful of rose water, and work then all thoroughly through the butter.

3d. Use the best and finest salt, and not too much, as the sugar takes its place in a measure.

4th. Look well to your packages [tubs, firkins, kegs or jars] and let them be well scalded and soaked [in brine ?] for a couple of days before using.

We see nothing especially *new* in the foregoing, except the rose water, but our readers have it for what it is worth.—Eds.

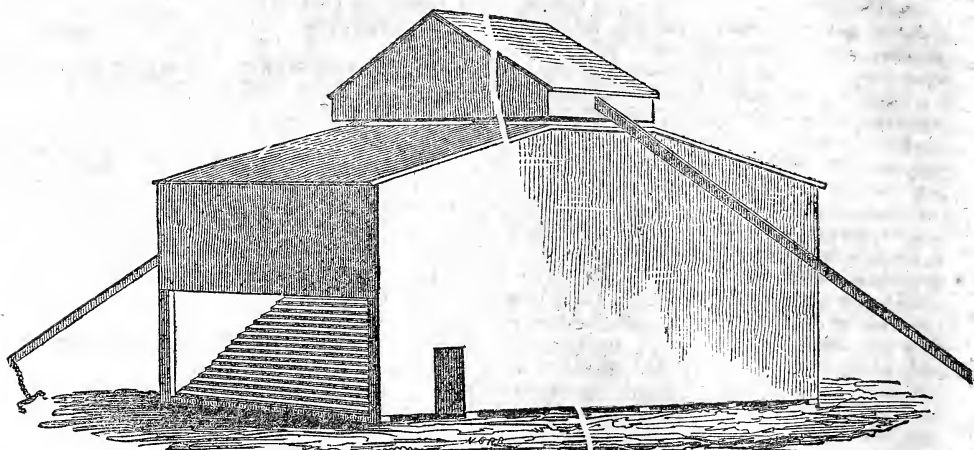
CHEAP FURNITURE AND ORNAMENTS FOR ROOMS.

Pretty *window seats, ottomans, &c.*, are easily made by taking a box of suitable size and shape, turning it bottom up, cushioning with cotton, hair, moss, hay or old woolen rags, and covering it with remnants of carpeting or cloth to suit the other furniture. Almost every family has some boxes that might be turned to good account, making inexpensive seats that the family will greatly prefer to chairs, and giving an air of comfort and competence that will make home much more attractive. Do not make the seats too high or narrow or the cushions too hard, and if for common use cover with some modest color that will not show dirt readily. The boxes can be made with lids and hinges to hold wood, clothes, or other articles, if desired.

Mrs. Cutler and others have from time to time given descriptions of ornamental articles that could be made at home easily; to these we have a few to add. At the exhibition of the American Institute in New York, last fall, was a very beautiful centre table—home made. A thick plank was cut into a circle of the required size and mounted upon a standard terminating in three feet. This was entirely covered with split acorns, put on in various fanciful designs, laid in glue, paint or other cement, and the whole covered with two or three coats of varnish. The effect was very beautiful indeed. We have seen old picture frames fitted up in the same style, that were really elegant.

An equally pretty and more delicate mode of ornament is made from the fresh cones of the pitch pine. Separate the scales and put on as you would acorns, overlapping the scales as they are in nature. Pretty flower-vases, picture frames, &c., can be cut from pasteboard, then, if the cones are soaked in warm water, the scales can be sowed on with stout thread, then let the whole be varnished before the cones become shrivelled, and they will appear more plump permanently.—*Ohio Cult.*

STING OF A BEE.—Apply salutarina wet. It is an excellent cure. This fact should be remembered when the stinging season comes on.



SOUTHERN CENTRAL AGRICULTURAL SOCIETY--FAIR OF 1855!

The following prizes for the more important staple crops to be shown at the Fair of present year, were adopted by the Executive Committee at their late meeting in Atlanta. Those who wish to compete, should be "up and doing" at once. We will endeavor to give the remainder of the list in our next:

FIELD CROPS.

1. For the largest crop of Cotton produced upon two acres of *upland*, with the mode of cultivation, the amount and kind of manure used; the period of planting, the number of times plowed and hoed, *the kind of Cotton*—the land to be measured and the Cotton weighed in the presence of three disinterested and reliable witnesses, with certificate from them, pitcher, \$50
 2. For the largest crop of Cotton produced upon two acres of *low land*, (the same requisition as upon two acres of upland,) 50
 3. For the largest crop of Pea Vine Hay, raised on two acres, one bale to be sent as a sample, with a certificate of quantity made, silver cup, 10
 4. For the largest crop of Native Grass Hay, raised on 2 acres, the same as above, 10
 5. For the largest crop of Foreign Grass Hay, raised on 2 acres, the same as above, 10
 6. For the largest crop of Corn grown upon 2 acres of upland; the period of planting, the mode of cultivation, kind of corn, times plowed and hoed, the amount and kind of manure applied—the land and corn measured in the presence of three disinterested and reliable witnesses, with their certificates—a silver pitcher worth 50
 7. For the largest crop of Corn grown upon two acres of *low land*, (requisition as upon upland Corn) 50
 8. For the largest crop of Wheat (drilled or broadcast) grown upon two acres of land, not under 60 pounds per bushel; the land and Wheat to be measured, and under the same requisition *in all things* as above, 25
 9. For the largest crop of *low land* Rice, on one acre, 25
 10. For the largest crop of Oats, kind, &c., raised per acre, 20
 11. For the largest crop of Rye, kind, &c., raised per acre, 10
 12. For the largest crop of Barley, kind, &c., raised per acre, 10
 13. For the largest crop of Sweet Potatoes raised per acre, one-eighth of an acre to be dug, and certificates of the yield by disinterested persons furnished, 20
 14. For the largest crop of Irish Potatoes raised per acre, 20
 15. For the largest crop of Turnips raised per acre, 10
 16. For the largest crop of Ground Peas, or Pindars, per acre, 10
 17. For the largest crop of Field Peas raised per acre, 10
 18. Best box of Chewing Tobacco, Georgia raised, \$5
 19. Best box of Cigars from Georgia raised Tobacco, 5
 20. Best sample of Georgia raised Smoking Tobacco, 5
 21. For the greatest quantity of Corn produced on an acre of land by *irrigation*, with the mode of cultivation, time of planting, irrigation, &c., 25
- Exhibitors of all the above crops must *state* in writing, *in full*, to the Secretary, all the requisitions as laid down for Corn, Cotton, &c., as above, when the articles are entered upon his books for exhibition; with the witnesses' certificates for the measurement of lands and pounds, and bushels per acre; without which the Judges will be required to withhold their awards, and exhibitors not complying with these requisitions will not be allowed to compete for the Premiums of the Society.

CROPS BY BOYS UNDER SIXTEEN YEARS OF AGE.

1. For the largest quantity of Indian Corn grown by any white boy under 16 years of age, upon an acre of land, a patent lever silver Watch, 25
- The rules in relation to field crops to be complied with.
2. For the largest quantity of Cotton produced by any white boy under 16 years of age upon an acre of land—patent lever silver Watch, 25
- The rules of field crops to be complied with.

SAMPLES OF FIELD CROPS.

1. The best variety of Bread Corn, with two bushels as sample, \$10
2. Best variety of Corn for stock, two bushels as samples—tested by weight, 10
3. Best variety of Wheat, with a bushel of grain as sample, 5
4. For the best variety of Sweet Potato, sample of two bushels, 5
5. For the best variety of Field Peas, sample of one bushel, 5
6. Best variety of upland Cotton, two stalks as samples, 5
7. Best variety of Sea Island Cotton, with two stalks as samples, 5
8. Best bushel of Rice, 5
9. " " " Oats, 5
10. " " " Rye, 5
11. " " " Barley, 5
12. Best bushel of Irish Potatoes, 5
13. Best variety of grass seeds adapted to the South for Hay or Grazing, 10

Exhibitors of crops, must give in writing to the Secretary a full account of each crop offered—its adaptation for profitable cultivation, &c. Exhibitors of Hay, must give the mode of cultivating, curing, harvesting, &c.

COTTON BALES.

- 1 For the best 20 bales of Upland Cotton, \$30
- 2 " " " " " " " " 15
- 3 " " " " " " " " 10
- 4 " " " " " " " " 5
- 5 " " " " " " " " 20
- 6 Best bale of (400lbs.) Sea Island or Black Seed Cotton raised on upland, 20

The Cotton must be on the Fair Ground during the Exhibition, to claim the premium.

GEOLOGICAL TEXT BOOKS--AGRICULTURE IN TENNESSEE.

D. LEE, M.D., DEAR SIR:—There is a disposition in this vicinity to get up a Geological Club, and we want such books as will suit plain farmers. I know none as well calculated as yourself to advise us in this respect. You will, therefore, indulge me in calling on you for the desired information. We want the plainest and least technical books; such as will give the principles and theories of the science, and the most practical instruction.

For myself I know too little of that important science, though I have devoted, for years, much thought to nearly all the other natural sciences; and for half an age Agriculture has interested me more than any other subject; but it is certain that it can not be well understood without Geology. I am, therefore, at this late age (50) forced to become a student of that science.

While writing, permit me to give you an account of our Agricultural Society in this (Smith) county. In February last our Legislature passed a law creating an Agricultural Bureau, and providing for an organization of County Societies. During the last week in July a dinner was prepared in a grove of this vicinity, at which speeches were made on various subjects, and I made an extemporaneous talk on Agriculture. I assumed three positions:

1st. That Farmers, as a mass, are not respectable, so far as influence is concerned, and it is their own fault.

2nd. That not one farmer in our county plows deep enough.

3rd. The plan of farming, so as to wear out our lands and waste our timber, is a sin of great magnitude, of which our whole farming population are guilty before God.

Contrary to my expectations, nearly every person present (about 500) admitted the truth of all these positions.

On the last Saturday in October, we had a meeting in Rome of about 100 persons; at which two short discourses were made on Agriculture, by Esq. MONTGOMERY and myself. At the close, 52 men became members of an Agricultural Society.

On the 4th of this month we adopted a Constitution, and on the 20th enacted By-Laws. At the last meeting we had 92 members; 65 are life members, who paid \$10 in advance, and 27 are annual members, who pay \$2 per annum. Thus, you see, we have \$704 to begin with, and shall soon double the amount and the number of members.

You will be better prepared to appreciate our Society by a few extracts from our Constitution and By-Laws.

"ARTICLE 3. This Society shall be perpetual; dispensing benefits not only to its existing members and the present generation, but also to future members and generations for indefinite ages.

"ARTICLE 4. SEC. 6. This Society shall vest all money received for membership in some way, so as to yield at least 6 per cent. interest per annum; in all cases the investments shall be so made as to have real estate bound for the sum or sums invested, so that there shall be no possibility of loss; and all money so received and invested shall be a perpetual fund; the Society having no power to use it so as to diminish the principal.

"SEC. 9. Any money or property which may be donated to this Society shall be added to the perpetual fund, * * * unless otherwise directed by the donor."

BY-LAWS.

"ARTICLE 6. SECTION 1. Should any donation be made to this Society, so as to make a permanent fund; said fund shall be forever called by the name of the donor.

"SEC. 2. * * * but should any donor fail to specify the objects of his gift, then this Society shall lay out the interest or profits of the donation, annually, biennially, or otherwise, in awarding premiums for Essays upon

selected branches of production or the education of the laboring classes.

"SEC. 3. In all cases where a series of Essays shall be called forth by a donation, the series shall be forever called by the name of the donor."

From these extracts you may learn the spirit of our Society. Our Fairs will be held at Rome, a small town on the Cumberland River.

I think that we may rightly claim that our Constitution is *multum in parvo*. What will be our permanent fund 20 years hence, we cannot guess, but it will be large, and must increase indefinitely.

There are at least four important features in our society:

1st. It is perpetual. It will last for centuries.

2nd. It never can be bankrupt, because it never can go in debt, and real estate will always be bound for the permanent fund.

3rd. The Society must ultimately possess a very large fund, because every new member and every donation, for ages, will increase the fund.

4th. Should we be fortunate in receiving donations, the best talent of the Union will be employed annually, for ages, in getting up and publishing to the world Essays upon Agriculture and the Education of producers.

Our members have the right spirit; we all confess our ignorance, and hence are ready to learn. Our community, old and young, will soon make a large class of students of Agriculture. I hope all the counties in the State will do likewise. Then will Education become *general, thorough and practical*.

Disjoined as this letter is, I know it will be acceptable to you. Some of us, in this section, read the *Southern Cultivator*, and know what exertions you have been making for years, to instruct, elevate, and ameliorate the productive classes; and you may regard some of the spirit and sentiments of our society as having emanated from yourself.

Could the doctrines you have so long and so forcibly urged upon the renovation of land and the diversity of products, be generally understood and practiced, what would soon be the wealth and strength of this Republic? And could our farmers and planters rightly understand their interest, they would soon respond to your calls, and speak out at the ballot box in tones not to be misunderstood in the halls of Congress. Our aspiring politicians, who, on the stump, have such large love for the dear people, and in the councils of the nation know and care so little for their true interest, would receive an unmistakable hint.

The business of stimulating and informing the producers of our country is as arduous as it is noble. The stumbling stone is the want of proper information, and how a requisite amount of information can be disseminated is the puzzle. I hope your school will be a centre from which many instructive rays will radiate, and many teachers will be sent forth to teach Scientific Agriculture.

And I hope, too, that we shall soon get up an Agricultural School in Tennessee. We tried it 16 years ago and failed, but there is more correct thinking among us now than then.

Respectfully,

F. H. GORDON, M.D.

Sugar-tree Farm, (near Rome, Tenn.) Nov., 1854.

REMARKS.—Absence from the State prevented the letter of our esteemed correspondent receiving earlier attention. The enterprising farmers of Tennessee are deserving of all commendation for having constrained the Legislature to establish an Agricultural Bureau at the seat of Government, and divide the State into several districts, the better to advance its great farming interest. The thorough organizations of Societies after the plan given by Dr. GORDON, or something similar to it, cannot fail to render the most im-

portant service to the country. A few energetic men in a county to take the lead, are sufficient to establish and maintain an association of a most useful character. Frequent discussions between neighbors pursuing the same occupation prompts them to read and think much more than they would without incentives. Useful experiments will be tried, and additional pains taken to confirm or refute the favorite theories of differing members of the society. They will soon feel the want of a good professional library, and wisely unite their contributions to purchase the same.

In reference to geology in its connection with agriculture, the small work of Dr. HITCHCOCK, President of Amherst College, is best adapted to popular use. Its retail price is, we believe, but a dollar. *LYELL'S Elements of Geology* is a larger and more elaborate work which may be read with equal interest and profit. A first class textbook on Agricultural Geology has yet to be written in the English language; nor have geological phenomena been investigated in their bearing on the soil and subsoil, as extensively and critically as the importance of the subject demands. All superficial investigations are nearly valueless. L.

DITCHING LOW, WET BOTTOM LANDS.

LETTER FROM MR. GRANT.

MESSRS. EDITORS—I see in the June [1854] number of the *Southern Cultivator* a letter from Mr. JOHN FARRAR, of Atlanta, Ga., recommending the bringing into cultivation creek bottoms and branch lands, which I am attempting to do and not having been accustomed to doing such work it would be of great advantage if I could, through your valuable paper or by letter from the gentleman himself, get his views in full on the subject of ditching and draining low or bottom lands. As he remarked in his letter he could write a good deal more, I would be glad to have a full detail on the subject of draining bottom land.

Yours respectfully,
W. N. GRANT.
Jasper Co. Texas, 1854.

MESSRS. EDITORS—The letter of Mr. GRANT, of Texas, to you, requesting information on the subject of ditching creek and branch bottoms is received. I suppose you forwarded his request to me, mainly on account of his making mention of me and of my letter in the June number of the *Cultivator*. Could I give Mr. GRANT such information as he desires it would afford me pleasure. To give general instructions on this subject would be an easy matter in some men's hands—such as have ideas and words suited to express their theory and practice in such matters. I consider myself but little favored with such gifts. I will, in the first place, say to Mr. GRANT that by close observation and a little practice he will be better informed on this subject than he will be by any instructions I can give him in writing. If I were on his lands and could take a survey of his bottoms, I could give him more information and advance ideas that he would better understand in one hour than I can by a half dozen written communications. The most important consideration on the subject of ditching is, first, a proper location; next, a proper width and depth for each ditch, always having an eye to the quantity of water that may be expected at any time. In nine cases out of ten it is the surest plan to run the main ditch in the lowest part of the bottom. In many bottoms there will be springy wet places after the main ditch is made. In such cases there must be drain ditches made, running into the main one, and these should be made what is called blind ditches. This is done by cutting them of sufficient depth, say two and a half to three feet deep, and one and a half to two feet wide. The cheapest and quickest plan for making the drain where poles can be had plenty, is to get them of proper size, place one on each side on the bottom

of the ditch and place the third pole on top of those two; if the poles be of the right size there will be cavity or space sufficient to drain all the water that will come into the ditch. This being done, take small brush, &c., put it on the poles, chop it so as to make it lie close, then fill up the ditch with the dirt that was taken out and you have a blind ditch; the land can then be cultivated as well as if the ditches were not there.

It requires a great deal of ditching to dry some spots of land so as to make them productive. I have known 400 yards of blind ditch on a half acre before it could be thoroughly drained; but this is running an expense for improvement higher than is advisable in most cases. In many bottoms after the main ditch is made on the lowest part there must be a ditch made on each side at the lower edge of the hill to keep the hill side water from the bottom; and for another purpose, they cut off the drainings of springy, wet places which are frequently found at the edge of hills. The word is, when a man undertakes to reclaim bottom land and put it in a profitable state of cultivation, he must not stop before he puts in as many ditches as may be required; he then may, with some propriety, expect to be rewarded for his labor. The size of a ditch depends not a little on the fall it may have—a ditch where there can be but little fall obtained must be wider in proportion to the less fall it may have. Where there is considerable fall for a ditch there need be no great concern how it is made, if it be straight; for if the roots and other obstructions be kept cleaned out of the way it will not be a great while before it will be as large as the owner will wish it. In laying out a location for a ditch it should be as straight as circumstances will admit—avoid sudden curves or crooks.

To give an idea of the size of a ditch, I have one now in progress 8 feet wide and wish to get it near 4 feet deep, if the fall will admit of that much. The surplus rain water that falls on some 200 acres of land, and but little broken, will have to pass off by this ditch. I am one that does not hire Irishmen or any other hands to ditch. Any fellow that can use a hoe or an axe can be learned to ditch in a few hours. First stick stakes in a line for the ditch, then a line 15 or 20 yards long with a peg to each end; peg down the line tight on the line with the stakes; mark this down with the spade; then measure the width you wish the ditch from each peg line down on that side; then put the line out of the way, and there is no further use for it before this part of the ditch is made and you are ready to lay off another length of line. A spade, a long or a short handled shovel, an axe and a mattock are all the tools that are wanted for ditching. A long handled shovel is preferable to the short—they work with more ease and a hand can do more with them. The spade and shovel should be of the best kind—these are much the cheapest in the end. AMES' best shovel (steel) are the best I am acquainted with. The spade should be No. 3, of the best pattern. I am in favor of the best tools in all cases for plantation purposes, and I know from experience that there is nothing lost, notwithstanding they cost a little more at first.

I have written as much, Messrs. Editors, as I can think of on this subject, that will be of any interest to the readers of your paper. Yours very respectfully,

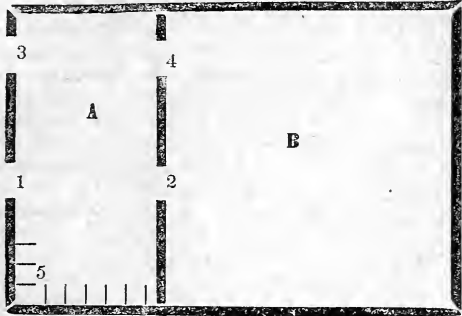
JOHN FARRAR.

Atlanta, Ga., 1854.

TRANSPLANTING EVERGREENS.—The roots, while out of the ground, should be kept moist, and they should never, for a moment even, become dried during the process of transplanting. Hence, a rainy day is recommended, in all cases, especially where the roots are denuded.

POULTRY HOUSES, HENS' NESTS, &C., &C.

MESSRS. EDITORS—However excellent the plan of a "Poultry House" recommended by yourselves in the August number of the *Cultivator*, the expense of such a building is greater than most of your readers are likely to incur. I therefore take the liberty of suggesting the following, which is probably as cheap as any plan on which a convenient poultry house can be built:



Let the diagram represent the ground floor of a building 20 by 30 feet, with walls 9 feet to plates. The frame, common 3 by 4 inch scantling, with the lower ends standing on brick, rock, or in the absence of either, on small pieces of heart plank. The boarding to consist of one plank 12 inches wide at the base, the balance 1 by 3 inch slats nailed on horizontally. If the situation is subject to depredations by minks or pole-cats, the spaces between the slats should not exceed 1 1-4 inches; but if not so exposed, the cracks had best be 2 inches wide. Let 1 be front door; 2, partition door, and 3 and 4 small passways for poultry, to be closed at night by slides. A, front room 8 by 20 feet, for hens with young chicks to roost before weaning their broods. B, Nest room 20 by 22 feet, with a floor over head, with sleepers 6 feet above ground. 5, six partitions 6 feet high. Room A being open over head to roof. 3, winding stairway for ascent of poultry to roost. The roosts 1 by 3 inch slats with one or two upright supports of the same material, to give them the necessary strength; the roosts not to be more than 12 or 15 inches above upper floor. The object of the floor over B is to catch the droppings of the poultry, so as to keep the nest room at all times clean; it being much cheaper to put a floor than to build a separate room for roosting. For stairway take thick plank, say 2 1-4 by 12 inches wide, and at intervals of 3 inches cut in with a saw 1-4 inch deep and chip out from above. Poultry will go up and down such a gangway much more readily than if the upper surface were smooth or narrow. Nail some slats obliquely to the inside of studs and it will brace the building just as well as if let in with mortice and tenons. The whole to be under a good roof.

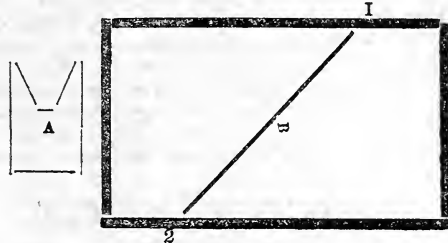
By making the hens with young chicks roost in the front room they will not only be protected from bad weather, but when the young broods are weaned they will be already trained to go into the house at night; where seeing the older ones going up to roost, and the gangway being of easy ascent, there will be no difficulty in learning them to follow.

If a separate room be desired for setting, run another partition across B, so as to cut off 8 feet at the back end, leaving said partition open from ground up to about 18 inches and place the nest boxes so as to close up said opening. When a hen wishes to set, slip the nest box with the hen in it, gently through the opening into the setting room and put another laying nest in its place so as to close up the opening.

Where a separate room is used for setting, it will be necessary to have an opening from the same into a separ-

ate yard (according to your plan in the *Cultivator*) so as to prevent the hen from returning through the front into the laying room, or she will be apt to abandon her own nest and take possession of some other in the laying room. If a hen be left shut up and not allowed to go out to feed she is apt to take to eating her eggs.

To make the best nest boxes will require plank of two widths—the pieces for front and back being 10 or 12 inches wide and 12 inches long. The front sawed from upper corners about half way down and a little to each side of the centre so as to leave room for the hen to step, when getting in and out.



Thus A will represent the front piece, and B a piece of plank 3-4 of an inch thick, 15 inches wide and 30 inches long. By sawing obliquely as from 1 to 2 you have the sides—the two longest edges being turned in front when put together. This will give a nest box 12 by 13 inches in the clear, 12 inches high at the back and 18 in front. Fourteen inches of the wide plank will make the floor and 18 inches the top—in all 5 feet 2 inches in length of wide plank and 2 feet of 12 inch plank; being a cost of less than 10 cents to the nest box, besides your labor in putting it together.

Sleepy Hollow, Aug., 1854.

TATTLER.

CURE FOR RHEUMATISM, &C.

MESSRS. EDITORS:—In the November number of the *Cultivator* of 1854, you were pleased to insert an article over the signature of A. T. L., (it should have been A. T. J., and Cadaretta P. O.), which I was induced to write, not as an aspirant for fame, but to the end that public sentiment in relation to a topic fraught with so much interest, should not be misled; nor that erroneous theories (the butterflies of the day) ever should supplant true ones. In said article, the 22d line from the top, for "reputation" read refutation. It was foreign from my intention to accuse W. P. W. of struggling for renown—though his article was replete with everything necessary to betray a high state of mental culture. I call not in question the motives of its author. He doubtless is honest and candid, as we all should be. But his theory was wrong, and hence the erroneous deductions therefrom. My present purpose, however, is not to try to vindicate my position, nor fire an additional pop-gun at his. Public opinion, the great Sultan of the land, will sieve, filter and digest the diversified productions of the day, and drive every vestige of error from the domain of science. But to my purpose.

In the close of my article referred to, I gave the public what I conceived to be a sovereign remedy for Sciatic and Rheumatic pains, and remarked that I would correspond with any wishing to try the remedy privately. This pledge, if I redeem, will prove an arduous task. For I have received letters of enquiry from divers parts of the States; and I should like to answer them by the wholesale, through the medium of your journal, if you can sympathize with one who has inadvertently got into such a dilemma. They all wish a more minute description of the vine, with further directions, whether or not it will cure cases of long standing, and whether it has invariably to be applied to the feet, no matter what part of the system is attacked, &c. &c. These and various other inqui-

ries are being made by the many who are the unfortunate victims of these painful diseases, and since it does not grow in these diggin's, there are many who wish to be referred to some one where it does grow, who could show or send a specimen by mail. If I do so, and those to whom I refer should consider it assuming, or an intrusion, I beg pardon. It has been near fifteen years since I have seen it growing. I have travelled 300 miles N. E., and near 600 S. W. from here, and have frequently looked for it, and never saw any, though it was in the winter season, when I would be the less likely to see it than in summer. I never have heard of any being seen west of Wetumpka, Ala. I presume it can be found almost any where east of the Coosa river. I know it grows abundantly on and near some streams in Randolph and Chambers counties, Ala., particularly on the Weadka Creek, which empties into the Chattahoochee river between Vernon and West Point. It also grows in Heard, Troup, Bibb, Monroe and Jones counties, in Georgia. WM. C. WILLIAMSON, of Louisa, Randolph county, Geo., or JOHN McLAIN, of Fredonia, Chambers county, Alabama, could show it to any person, or if requested, could next summer forward a specimen to the *Cultivator* Office, which could be exhibited engraved. Here I will inform one inquirer, who wished to have some sent to him—my experience is it must be applied fresh. I once brought some here in liquor from Alabama, a distance of 300 miles, when it became so much impaired it would not draw a blister at all. And to the sufferer who sues for relief in this way, let me say, you would do well to summon up all the fortitude you can rake and scrape, as it will doubtless be taxed much beyond your anticipation. I knew a negro woman whose owners would or could not control her, who had it applied to both her feet; she became so inveterate she took it off and put her feet in cold water. Fortunately for her, the blisters came after awhile, and she was cured; but I regarded that as almost accidental, as the directions were not complied with. I do not talk thus to deter any, but there are many who are so chicken-hearted, and possess such a peculiar temperament that it becomes necessary for them to screw themselves up to the sticking point, in order to meet the crisis, Caesar-like. Tell it not in Gath. It is almost like standing on fire all the time it is drawing. It should stay on from six to twelve hours, and then take off, when it will be perhaps twelve hours more, or longer, before the blister will be ready to clip; up to this time it will be painful. Then treat it as any other blister.

This vine is not confined to low lands, but grows most abundant near streams, delighting to run along fences, sometimes perhaps several yards; it will also run up bushes upwards of ten feet, and cluster and twine about them similar to a grape vine. I never saw any run up a tree. A recent bloom shows a lively and beautiful appearance, and when dry in the fall presents a fuzzy, brown appearance, near the shape and size of a pine burr, which contains the seed, similar to rhubarb seed. The leaves are broad, oblong, smooth on the surface and edge. Stem of an old, thrifty vine at the ground perhaps as large as your finger. The roots are few, white, running straight downward very deep, generally as large near the surface as a goose-quill, resembling nothing so much as the Sampson snake-root.

Directions.—Take of the bruised root a small quantity, and put it on a piece of leather or colewort leaf, about the size of a half dollar, and let it remain from six to twelve hours. Dampen it a little when it becomes dry, but not enough to make it run, as it will take all the skin off where it goes. It should invariably be put on the feet, no matter what part is affected. If only one side is attacked, apply only to one foot; otherwise to both. I assert, from the history of my experience in the matter, it will cure both recent and cases of long standing, chronic and in-

flammatory, where it is not the consequence of poisoning drugs. Were it not for protracting this article, to the exclusion of something more interesting to the many, I would give the outlines of a few cases; but propriety forbids. One may suffice. About the year 1825, my father then living in Bibb co., Geo., had a valuable young negro man taken with rheumatic pains, which in a few months affected him so bad, and he was in so much pain continually, that he never pretended to leave his cabin. He from the first had the best medical attendance that could be procured. His sufferings became intensely severe, and he was almost reduced to despair. At length father heard of an old man going about, at that time operating in an adjacent county, who professed to cure such cases, and made no other pretensions. He cured for \$25, and had nothing if he failed. He was sent for and engaged upon those terms. He went out on father's land and procured the roots, and made the application, and no less remarkable than true, the boy was enabled to go to plowing before he could walk barefoot upon his blistered feet. He has ever remained healthy, and he is still in the family, and perfectly sound, so far as pains are concerned. The application should be moistened with vinegar. I apprehend cattle destroy this vine where they eat out the range. One enquirer informs me his is a complicated case of five years standing, of neuralgia and rheumatism, occasioned by taking mercury during a protracted spell of sickness. The voice of suffering humanity verging on despair is importunate, and very loth to "give up the ship"—hoping perchance there may be some "balm in Gilead." I would recommend him to try this remedy, and repeat the application twice, or even thrice, if relief is not sooner obtained.

A. T. P.

Cadaretta P. O. January, 1855.

REMARKS.—Our journal is scarcely the proper medium for communications of this character—yet, as considerable interest has been manifested in the specific of our correspondent, and as we would not willingly neglect an opportunity of benefiting suffering humanity, we cheerfully give it place. We were, however, obliged to omit the onslaught of our friend upon the mercurial remedies of "old school" physicians; for the obvious reason that it would, if published, give rise to an endless amount of discussion on a subject with which we, as agriculturists, have no concern.—EDS.

ROTATION OF FOREST TREES.

THERE are millions of acres of pine forests which present an even surface for tillage, whose improvement for continued and profitable cultivation, is a matter of great moment. If their virgin soils do not exhibit an acid reaction, they at least possess too little of alkaline ingredients for high agricultural productiveness. We have been astonished at the benefits that accrued from the application of marl and shell lime to these virgin earths in which there was no lack of organic substances. Where the *potash* came from that existed in such large crops of wheat and corn, appeared a mystery. Lime seemed to bring it out from its before insoluble silicates. Indeed, we can account for the natural fertility in the Southern peninsula of Maryland and those districts of Virginia and Georgia where marl abounds, which we have visited, in no other way. In an acre of wheat or corn there is five times more potash than lime; while the amount of soluble potash in natural pine-bearing soils is exceedingly small. A pine tree when burnt yields but little ashes, and they are not rich in potash. Pine leaves, however, yield pound for pound, twelve times more ashes than pine wood; and it is mainly the annual fall of leaves on the surface of the ground, giving alkalies drawn from the deep subsoil, as well as organized carbon, oxygen and hydrogen, that

enriches the land. By adding a little lime to this natural source of fruitfulness, the owner of pine lands will greatly enhance their value. They can be changed permanently from the production of coniferous plants to that of cereals—a difference as wide as that from a loaf of bread made of pine sawdust to one made of wheat flour.

The difference in a soil that will yield pine wood abundantly, but wheat and maize very sparingly, is the pivot of plant rotation, to which the reader's attention is particularly invited. The volatile alkali called ammonia, which abounds in Peruvian Guano, works this change in piney woods land for one or two crops, in a remarkable degree. Wood ashes also produce signal effects on such soils, being far more lasting than guano. Alkalies in some form appear to be necessary to change a pine-growing soil into one adapted to the cheap and permanent production of oaks, hickory and grain.

Numerous facts similar in purport to those above stated are well known to every observing farmer; but the reasons suggested by Professor JOHNSTON and others, why pine trees succeed oak forests, and the latter, or beech, or other hard deciduous trees succeed pines, do not appear to us entirely satisfactory. On the rich lands of the Western States, and in Western New York, when beech and maple, or oak-bearing soils are left to grow up a second time in forests, they do not, like the comparatively poor land of New Jersey, Delaware, Maryland, Virginia, North and South Carolina and Georgia, produce a crop of old-field pines, but a second growth of the trees of the primitive forest. Coniferous plants never supersede those of a higher order and more complex development where the latter can flourish.

If pines drive out oaks and poplars, it is because the latter find an uncongenial soil, made so not by *nature*, but by the labor of *man*. Nature never rotates her vegetable productions from a higher to a lower order of organism, if her developments are not molested. The deeply descending tap-root of pine, its light wind-driven seed, and its abundant foliage, fit it, in an eminent degree, to recuperate impoverished old fields, and prepare the surface of the ground to bear a crop of oaks, or corn or cotton. The growth of pines does not, however, necessarily induce the growth of oaks or beeches; for there is no reason to suppose that the pine forests of North and South Carolina and Georgia have not flourished on the same surface for twenty successive generations of trees. There is no evidence of a natural system of a rotation of plants from pine to oak, and oak to pine. L.

TO DESTROY PEACH TREE INSECTS.—A very intelligent writer in the London *Gardener's Magazine*, who had tried many experiments to preserve the peach tree in health, gives the following as the best composition for this purpose:

"Take half a peck of slacked lime, a quarter of a peck of soot, two pounds of soft soap and one pound of sulphur. Upon these warm water is poured, till the whole mass becomes of a creamy consistency. This composition is applied to the whole tree—trunk and branches, with a cloth or sponge, as hot as the hand can bear it. The proper time of using this wash is immediately after pruning in the spring.

THE BULL'S RING.

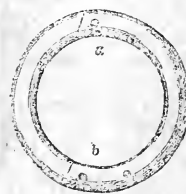
ONE mode of making rings for bull's noses, consists of two semi-circles, constituting a circle or ring, joined together at one end, *a*, with a rivet passed through the ends lapping over each other, after each end is reduced to half the thickness of the ring, and acting as a hinge; and the other two ends, *b*, also lap, and are fastened together with

two countersunk screws. The ring is opened, as shown in *fig. 1*, before it is passed through the hole in the bull's nose. *Fig. 2* shows the ring screwed together as it hangs in the bull's nose; the joint, *a*, closed, and the lapped ends, *b*, also closed with the two countersunk screws, all flush with the surface of the ring. The ring is formed of quarter inch rod-iron, and its diameter over all is two and a

half inches. The surface should be very smoothly filed, and it cannot be too highly polished with sand paper.

The ring is put into the young bull's nose in this manner:—Let the person who puts the ring into the bull's nose, be provided with an iron rod about a foot long, tapering to the point, and rather thicker than the rod of the ring. Let a fire be near to heat the point of this rod. He should also be provided with a small screw-driver. Let a long, stout cart-rope be provided with a noose hitched upon the middle, just large enough to take in the bull's neck like a collar. Put the bull into any out-house that has a window sufficiently low to allow his head to reach through it, though it is safer for his knees to press against his counter a stout bar of wood. Slip the top of the loop of the rope over his head down to the counter, bring his breast against the window or bar, pass the rope from the lowest part of his neck along the ribs on each side round his buttocks, like a breeching, and bring an end through the window or over the bar on each side of the bull, where let a stout man hold on at each end of the rope, and prevent the bull retreating backwards from the window or bar. A man stands on each side of the bull's buttock, to prevent him shifting from one side or the other. A man also stands on each side of the bull's head, holding on by the horn, or by the ear if he is hornless, with one hand, and keeping out the nose by supporting the jaws with the other. The operator having the iron rod given him by an assistant, heated in the fire just red enough to see the point in daylight, he takes the bull by the nose, with his left hand, and feeling inwardly with his fingers, past the soft part of the nostrils, until he reaches the cartilage or septum of the nose, he distends the orifice of the nostrils, so that the hot iron may pierce clear through the septum without touching the skin of the nostrils or his own fingers, taking care to pass the iron in a direction exactly parallel to the front of the nose, otherwise the hole will be pierced obliquely. Immediately after the

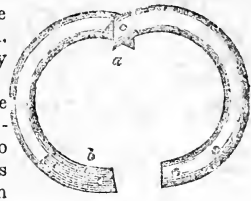
(Fig. 2.)



THE BULL'S RING AS FASTENED IN HIS NOSE.

tapering rod has been passed as far as to make the hole sufficiently large for the ring, and the wound seared enough, the operator then takes the ring opened (still holding by the bull's nose with his left hand) passes one end of it gently through the hole, and, on bringing the two ends together, lets go the nose with the left hand, and taking hold of the ring with same, still to command the bull, puts one screw in after another, and secures each firmly with the screw-driver. He then turns the ring round in the hole, to feel that it moves easily, and to see that it hangs evenly, after all which the bull is released. The ring should not be used until the wound of the nose is completely healed; though it is nothing uncommon to see the ringing of a bull delayed, until the time arrives that he must be led by it for some particular purpose, such as the exhibition for a premium at a show, when, in the attempt to accustom him to be led

(Fig. 1)



THE BULL'S RING.

about by the ring immediately after the operation, every part of the nose being still tender and sensitive, the poor animal is tormented. So alarmed do some bulls become by this operation, that they hang back from the rein-rope in the ring with such force as to tear the ring through the nose; but this is an abuse of the use of the rope, which should be slackened, and the animal relieved from pain, as often and until he learns to yield to the slightest motion of the rope. On first trying to lead the bull by the ring, the person who has charge of him should not endeavor to pull the animal along after him, but allow him to walk on while he remains at his side, or goes behind him, with the rope in his hand. While so following, to relieve the animal as much as practicable of the weight of the rope upon the nose, the drover should throw the middle of the rope over the bull's back, and retain a hold of its end. Should the bull offer to step backwards, a slight tap on the shank with a stick will prevent him; and should he attempt to run forward, a mere check by the rope will cause him to slacken his pace. On no account should the drover attempt to struggle with the bull on the first occasion; on the contrary, he should soothe and pacify him, and endeavor to inspire him with confidence in himself and the rope, and to show him that he will receive no hurt if he will but walk quietly along. A bull soon learns what is intended for him when he is properly dealt with; but if tormented merely that the drover may show his power over him, it may be a long time, if ever, before he will learn to behave quietly when led.—*People's Journal*.

FARM BOOK-KEEPING.

In almost every other business, regular accounts are deemed necessary to the proper conducting of its affairs. The manufacturer might get along in the same guess-work way as farmers usually do, but at what rate he was making profits or losses he could not satisfy himself. A similar satisfaction in the farmer's business is one of the reasons why he should keep regular accounts with his crops and field, as much as the merchant and manufacturer do in their departments of business. Without accurate accounts no farmer can tell, save by a guess-work, which may be very wide of the reality, what crops, what fields, or what system of management are paying the best or yielding the most net profits. One of our British contemporaries has lately been directing the attention of its readers to the importance of farm book-keeping. It asks the question, Why are agriculturists an exception to others in the details of book-keeping? and in reply observes that there is no more essential branch of a farmer's education than that of being taught book-keeping, and that not only as to the every-day mercantile transactions of buying and selling, but also as to the noting the amount of produce of different fields, or the results of different systems of management, manuring, &c. It is essential more especially, to obtaining all the knowledge possible from any experiment, that every expenditure made on account of the crop, together with interest of land, should be noted down on one side, while on the other is put down every particle of produce of any value which the field or crop produced. By strict attention to details, the writer of the article referred to says, "his experience as a cultivator would prove the most formidable foe to prejudices which militate against his interest,—prejudices and errors in practice being almost invariably fortified from rough guesses, the necessary result of the absence of regular details; and this at least is one reason for the backwardness of agriculture."

In order to render farm accounts clear and accurate, one of the first things to be done is to make a plan or map of the farm, with the size of the fields marked upon it, &c. A field or crop may then have a folio to itself and all labor, manure, seed, &c., debited to it on one side, and all that

it produces credited to it on the other. In addition to the pecuniary advantage which would result from knowing what kinds of crops or modes of management prove to be the most profitable, there would be a satisfaction in being able to keep accurate accounts and in knowing instead of guessing as to profits, which would be enough to compensate any farmer for his trouble.—*Country Gentleman*.

SEPTEMBER (1854) GALE ON THE SEABOARD.

MESSRS. EDITORS—When I wrote you in August last, our staple crops of rice and cotton were everywhere fine and promising, in fact never was there a promise of more abundant harvest held out to both the rice and cotton planter of the seaboard.

We had an unusually hot summer, and the rains were so few that there was very little danger of either a *freshet* on the rice, or of *casting* in the cotton. The cutting of the rice, and the picking of cotton commenced the latter part of August, under the most glorious auspices; every one expecting that his barns would crack and groan under the accumulating produce! But alas! like JONAH'S gourd, our inflated hopes were soon withering on the ground! On the 8th of September, a most terrific hurricane ravaged our whole line of sea coast, from Charleston to Savannah especially, and extending into the interior beyond the head of tide-water. Great damage was necessarily inflicted on rice, cotton, corn, peas and slips, by the combined agency of wind and water (fresh and salt.) On exposed situations, the cotton stalks were stripped almost bare of fruit and foliage, besides what was killed by the actual invasion of the salt water. A great deal of rice that was cut and ricked in the fields was inundated and floated off, whilst standing rice was in a great many places thrown down head foremost into the water. Corn fields were completely tangled up, from the stalks being pitched and thrown in every direction across one another, with many of the ears lying down upon the wet earth. Slips were, in many instances, inundated and killed by the salt tides; also, many pea crops, and what peas were not killed by salt water, were *blasted* by the ferocious wind! A great deal of Long Cotton that will be sent to market this winter, will be but *half ripe wool* and the *damaged rice* on Savannah River is producing *mortality* among man and animals. Only yesterday I understood that the veritable Asiatic Cholera has broken out on certain river plantations, from the free use of the damaged grain! Fortunately, there was but little loss of life or limb on that dreadful day, and miraculously, but few ships lost. It really seemed, as if the fearful wind-god had but one mission to attend to, and but one object to execute; viz, the *destruction of our crops*. For this storm could not have happened at a more *critical* time, and strange to relate, it was the semi-centennial anniversary of the great seaboard hurricane of September 8th, 1804—exactly 50 years to the very hour!!

We put our loss down in both cotton and rice to *one-half* as an average, as some did not lose quite one-half, whilst others lost more. In spite, though, of all this destruction, neither Long Cotton nor Rice are yet bringing a *remunerative price* to the suffering planter. We all thought just the contrary, and that prices would rule very high, but it seems not. It is really too bad. The whole thing is reduced to this—that the Cotton Planter of the South will either have to go to the cities and seize the cotton buyer by the *throat*, or that he will have to plant *less cotton and more provisions*. It has thus been quite a disastrous year with us, especially when taken in conjunction with *yellow fever*. However,

"Hope leaps immortal from the ground
And heavenward springs with fiery bound."

Therefore, animated by this divine impulse, we are

about, again, to put the plow-share in the ground, and our shoulder to the wheel, doing all that man may do; and content to rest the issue with Him, who bridleth the wind and rideth upon the whirlwind.

Yours respectfully, J. St. J. G.
Bluffton, S. C., Dec., 1854.

FOR THE LADIES—HARMONY OF COLORS.

Red Drapery.—Rose-red cannot be put in contact with the rosiest complexions without causing them to lose some of their freshness. Dark red is less objectionable for certain complexions than rose-red, because being higher than the latter, it tends to impart whiteness to them in consequence of contrast of tone.

Green Drapery.—A delicate green is, on the contrary, favorable to all fair complexions which are deficient in rose, and which may have more imparted to them without inconvenience. But it is not as favorable to complexions that are more red than rosy, nor to those that have a tint of orange mixed with the brown, because the red they add to this tint will be of brick red hue. In the latter case a green will be less objectionable than a delicate green.

Yellow Drapery.—Yellow imparts violet to a fair skin, and in this view it is less favorable than the delicate green. To those skins which are more yellow than orange it imparts white; but this combination is very dull and heavy for a fair complexion. When the skin is tinted more with orange than yellow, we can make it roseate by neutralising the yellow. It produces this effect upon the black-haired type, and it is thus that it suits brunettes.

Violet Drapery.—Violet, the complimentary of yellow, produces contrary effects; thus it imparts some greenish-yellow to fair complexions. It augments the yellow tint of yellow and orange skins. The little blue there may be in a complexion it makes green. Violet, then, is one of the least favorable colors to the skin, at least, when it is sufficiently deep to whiten it by contrast of tone.

Blue Drapery.—Blue imparts orange, which is susceptible of allying itself favorably to white and light flesh tints of fair complexions, which have already a more or less determined tint of this color. Blue is, then, suitable to most blondes, and in this case justifies its reputation. It will not suit brunettes, since they have already too much of the orange.

Orange Drapery.—Orange is too brilliant to be elegant; it makes fair complexions blue, whitens those which have an orange tint, and gives a green hue to those of a yellow tint.

White Drapery.—Drapery of a lustreless white, such as cambric muslin, assorts well with a fresh complexion, of which it relieves the rose color; but it is unsuitable to complexions which have a disagreeable tint, because white always exalts all colors by raising their tone; consequently it is unsuitable to those skins which, without having this disagreeable tint, very nearly approach it. Very light white draperies, such as muslin plaited or point lace, have an entirely different aspect.

Black Drapery.—Black draperies, lowering the tone of the colors with which they are in juxtaposition, whiten the skin, but if the vermilion or rosy parts are to a certain point distant from the drapery it will follow that, although lowered in tone, they appear relatively to the white parts of the skin contiguous to the same drapery, redder than if the contiguity of the black did not exist.

VARIETIES AND PROPERTIES OF MANURES.

THE manures in general use in gardens are numerous, but I shall only notice those which I consider the most useful; and of these, the dung of horses, if not the best, is certainly the most general in use.

Next to the dung of horses, that of oxen and cattle is in the greatest request; and if slightly fermented, is an ex-

cellent manure for light, hot soils. It is also well calculated for soils of a dry, absorbent nature, as it retains its moisture for a greater length of time than most others.

Green vegetable matter is an excellent manure, but less attended to than it ought to be. Instead of collecting all useless vegetables, &c., in a garden into one heap, let the following simple mode be adopted: When a piece of ground is to be dug, go around and collect all the decaying vegetables, and immediately dig them in. The sweepings of grass walks and lawns are also of as much use as vegetable manure; and on being brought into the garden they should be dug in before fermentation commences; but it must be observed that they should not be buried at too great a depth, otherwise fermentation will be prevented by compression and the exclusion of air.

Sea weeds, when they can be procured, make excellent manure for most vegetables, but particularly for Sea Kale, Artichokes, and Asparagus. This manure, however, is very transient in its effects, and does not last more than for a single crop, which is accounted for by its containing a large portion of water, or the elements thereof.

The dung of birds, either wild or domesticated, affords a powerful manure, particularly that of the fomer. Pigeon's dung is in great repute, but it should only be used as a compound; or, if used as a simple manure, the greatest care must be observed in the distribution of it. It is a good manure for Strawberries and Raspberries; also the Fuchsia, Pelargonium, Coxcomb, Balsam, and it is indeed a rich manure for all potted plants that will bear rich feeding.

The dung of sheep affords good manure, but is seldom used in gardens.

Soot is a very powerful manure, and ought to be used in a dry state, and thrown on the surface of the ground. It is advantageously used in crops of Onions. It is sown at all times with good effect, and where it has been sown no maggot has appeared.

The ashes of wood, if not too much burnt, is a lasting manure, particularly for the Grape Vine and Pear; and if sown among Turnips, it is of great use to protect them from the fly.

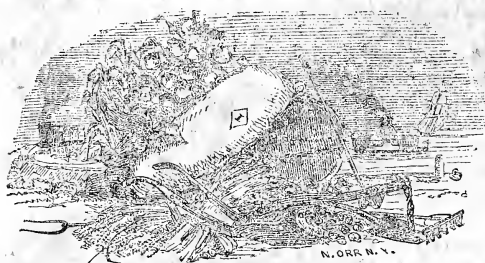
Of all mineral manures, lime is most known and generally used. It should, however, never be applied with animal manures, unless they be too rich, or for the purpose of preventing noxious effluvia. It is injurious when mixed with any common manure.

Manures, whether animal or mineral, are of such importance to vegetation, that all possible diligence should be used in the collecting and preparing them for the different purposes for which they may be required. By a proper application of them, and by a rotation of cropping founded on just principles, the worst garden ground may be not only improved, but rendered fit for the production of every vegetable that is usually cultivated in the different localities of this country.

ALFRED CHAMBERLAIN,

Gardener to Delancy Kane, Newport, Rhode Island.
[Horticulturist.]

SALT FOR QUINCES.—If you wish your Quince bushel to bear plentiful crops of large and golden fruit, train them with a single trunk and a low bushy head, leaving no shoots or suckers to draw their nourishment from the main stem. Then dig up the ground well in spring or early summer, and scatter from two to four quarts of salt over the surface as far as the roots extend; after which, spread a thick layer of straw or forest leaves around them, and they will take care of themselves until the fruit harvest, when you will be amply repaid for all your trouble. It may be necessary, however, when the fruit is well set on the branches, to thin it out somewhat, leaving only the fairest and best formed specimens evenly distributed, to prevent the limbs from breaking down with their burden.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 2..... FEBRUARY, 1855.

ANSWERS TO INQUIRIES, &c.

I. T. L., Sweetwater, Tenn.—Will give your business immediate attention.

W. N. W., Athens, Ga.—Our fish-ponds in this vicinity are generally stocked with *Bream*; but there is no reason why Gold Fish and many other varieties should not be extensively propagated in our mild climate. If you desire *Bream*, they can be obtained here, and Gold Fish may be ordered from New York. A fish-pond, to be perfect, should be fed by a bold, clear spring.

A. C. A., Jackson, Miss.—The seeds were duly received, soaked in hot water and planted. Hope to grow some of the plants. Are they evergreen or deciduous? Many thanks for your kindness. Missing numbers sent.

L. S. G., Claytonville, N. C.—Your inquiries in regard to seeds, grafts, &c., were answered by mail. The missing numbers have been sent you.

N. E. P., Franklin, Tenn.—A handful of Plaster or leached Ashes scattered around each stalk of Corn when 8 or 10 inches high, would be of great benefit to your crop. The number you desire was sent you per mail.

J. B., Talbotton, Ga.—Guanos has been used with much success for Cotton, on such land as you describe. Sow 300 pounds per acre broadcast, and plow in well.

M. W., Pass Christian, Miss.—Thanks for your kind expressions of good will and approval. Your request has been complied with.

E. M., Shongalo, Miss.—It may be that "kissing often goes by favor;" but not in the instance to which you allude. We had not the articles you desired; nor could we obtain them without trouble and expense. If you knew how much of our precious time is wasted in the vain endeavor to supply the various wants of our subscribers, you would give us credit for some desire to accommodate. We shall, hereafter, either be obliged to charge commission for out-door services or refuse to fill any orders not immediately pertaining to our own business. One Dollar per year buys the *Cultivator*, but not the exclusive time and leisure of its editors. We hope this matter will henceforth be more clearly understood by many of our friends.

J. I., Ingleside, Yazoo Co., Miss., desires particular information respecting "*Randall's Cotton Planter*." Will some of our readers respond to his wishes?

K., Homesville, La.—Trees of the true *Tinley* (or *Tinsley*) *Peach* may be obtained from ROBT. NELSON, of Macon, Ga. There are two varieties, the red and the yellow—both excellent.

B., Montgomery, Ala.—The location of our next Fair is not yet determined: and will not be until the Executive Committee meeting in March. As a permanent locality, it seems to us that Atlanta holds out the strongest inducements of any place in Georgia.

B. S., Lynchburg, S. C.—You will find a statement of the effects of "*Kittell's Salts*" in our January number, page 23.

Mrs. MINERVA M., Galveston Bay, Texas.—Your kind favor received, and enquiries referred to a friend on the coast, who will, doubtless take much pleasure in replying.

Will J. D. F. WILLIAMS, Esq., of Alabama send his Postoffice address to W. J. BINGHAM, Esq., of Oaks, Orange Co., North Carolina?

W. D. G., Longsbridge, Ga.—We will publish a full account of the new Ditching Machine in our next. "Croskill's Patent Clod Crusher" is an English invention that has not been introduced to any extent in this country, so far as we know. The inventor of the Plow you speak of is JAS. H. FORMAN, of Sharon, Chambers Co., Ala. Your other inquiries were answered per mail.

H. S., Red Boiling Spring, Tenn.—You can obtain Guano from POULLAIN, JENNINGS & Co., of this city.

Other enquiries and requests will receive attention when we find leisure from more pressing duties.

SOUTHERN CENTRAL AGRICULTURAL SOCIETY.

The Executive Committee of the "Southern Central Agricultural Society" met in Atlanta on the 16th ult., for the purpose of amending and improving the Premium List for the present year, locating the next Fair, &c. There was a very full attendance of the members, the following gentlemen being present:

Col. AUG. S. JONES, Savannah; Col. J. M. DAVISON, Woodville; Dr. JNO. S. LINTON, Athens; BENJ. E. STILES, Esq., Macon; WM. J. EVE, Esq., Augusta; RICHARD PETERS, Esq., Atlanta; Maj. J. S. ROWLAND, Cartersville, and Dr. JAS. CAMAK, (Secretary) Athens, Ga.

Much business of importance was transacted, and the Premium List for present year very carefully revised and amended. We give the prizes for *Field Crops* in another portion of our journal.

The location of the next Fair is not yet determined, but an adjourned meeting of the Committee to arrange this and other important matters, will be held in this city on Tuesday, March 6, at which time the various propositions will be finally acted upon.

PLOWS AND PLOWING.—We have lately tested the Michigan Double Plow, No. 8, and find it in all respects a most admirable implement. For burying up trash, grass, weeds, &c., and for width and depth of furrow, combined with remarkable easy draft, we have never seen its equal.

The "*Peacock Plow*, No. 1," and the *Subsoil Plow* of the "Nashville (Tenn.) Manufacturing Company," are also very superior. The "*Peacock*," however, has such a decided tendency to run deep, that, in heavy soils, it requires two very good mules to pull it. We regard this matter of "running into the ground" as an advantage in this land of "surface scratching," and hope to see more of the "*Peacocks*" in use. The *Subsoil Plow* of the Nashville Company is far beyond anything of the kind that we ever used, and as a drouth-preventive is invaluable. Both of the latter may be ordered from CARMICHAEL & BEAN, of this city; and the Michigan Plow, from LONGETT & GRIFFING, New York City.

INCREASE OF SUBSCRIBERS.—While we would return our unfeigned thanks to the many kind friends who have exerted themselves so successfully to add to our subscription list, of late; we would respectfully ask the assistance and co-operation of those who, as yet have given us no such assistance. Will not each subscriber add at least one more name and forward it to us with his own? This will double our list for the present year, and greatly increase our means of usefulness. It can easily be accomplished if each will make a slight effort. Be "up and doing," friends! and let us hear from you promptly.

AGRICULTURAL SOCIETY OF ALABAMA.

We are pleased to learn that a State Agricultural Society was organized in Montgomery on the 10th ult., and will hold its first Fair some time next fall. There is nothing so well calculated to advance the interest and promote the cause of Agriculture, as the formation of Agricultural Societies and the exhibition of the products of the soil and farm yard. These exhibitions beget a laudable spirit of emulation, and their ultimate tendency is to improve and advance the interest and conditions of the planting and stock-raising community wherever they are held.

Below we give a notice of its organization and a list of its officers:

"The Agricultural meeting for the organization of a State Agricultural Society, convened in the Court House on the 10th ult., as per previous notice. After the usual temporary organization of the meeting, a Committee was appointed to draft a Constitution for the Society, which was done and adopted by the Society. Under the Constitution, as adopted, the following named gentlemen were elected officers of the Society:

"PRESIDENT—Col. Isaac Croom. SECRETARY—N. B. Cloud. TREASURER—Col. C. T. Pollars.

"VICE PRESIDENTS—Dr. B. N. Powell, Macon; John Goldthwaite, Coosa; Judge B. S. Bibb, Montgomery; Dr. Wm. S. Price, Marengo; Absolom Jackson, Autauga; T. B. Betha, Mobile, and Gov. H. W. Collier, Tuscaloosa.

"EXECUTIVE COMMITTEE.—E. A. Holt, Chairman; R. F. Ligon, Dr. C. Bellinger, R. P. Powell, John M. Cheney, E. F. Montague, Col. Lewis Owen, M. A. Baldwin, P. P. Graves.

"After making the preliminary arrangements for a State Fair in the fall, the Society adjourned to its annual meeting to be held during the Fair."

PREPARING LAND FOR CORN.

As the time for planting this most important crop is rapidly approaching, a few hints on the proper preparation of the soil may not be inappropriate. The warfare now raging in Europe, with the excessive drouths we have had in the last few years, the certainty of an increased demand at high figures, all combine to draw, from every farmer, increased attention to this subject. In making preparations for a new crop of corn, we would suggest to our readers that they cannot commence their operations too soon, nor push them too fast when they do commence. The first grand prerequisite necessary is a team and plow, not a mere excuse by which, with hard pushing, the land may possibly be scratched to the depth of three or four inches, but a plow that will not only break your land but break it thoroughly. Land that is only half broken will never more than half produce under the best system of tillage of a seasonable year, while the product of such land, of a dry season, is certainly anything but encouraging. It is to the interest of every planter that his corn land be deep and thoroughly broken. Not a furrow ever should be run short of a depth of ten inches, while even fourteen inches would not be too much. The advantage of deep plowing are so many and so plain to be seen, that we deem it useless to dwell upon them at length. Corn growing upon land broke ten or fourteen inches deep derives a greater benefit, in any season, by being better able to expand its roots to a larger extent of soil, and thugather increased strength and sustenance, than it does from land not broke so deep, in which the roots are necessarily contracted and are forced to occupy a small space, or force their way through a firm and unbroken soil. But in a dry season the advantage of deep plowing are incalculable. Then it is that the great advantages of this principle are to be seen wherever put in practice. Land deep and thoroughly broke never suffers for the want of rain, even

in our warm climate. By breaking our land deep, the roots of the corn penetrate to a greater depth than in shallow broke land, and by this means are enabled to draw a sufficient supply of moisture, from its increased depth, independent of rain. Nor is this all: for, should the season prove wet, the surface moisture sinks down to the bottom of the deeply plowed land, and is there stored away as in a reservoir, upon which the roots can draw for sustenance *ad libitum*. *Manure well—Plow deep and plant early!* if you desire corn to "sell and to keep."

CLUBBING—THE HORTICULTURIST AND CULTIVATOR.

There was a mistake in our notice respecting the terms of our journal and the *Horticulturist*, in the December number of 1854. The price should have been \$2.25 instead of \$2 per year. But all who remit \$2 prior to the first of February, shall receive both in accordance with our notice. After the 1st, we shall be obliged, in justice to ourselves, to charge \$2.25; at which rate they are "cheap enough," in all reason.

ST. MARY'S BANK.

Our subscribers are respectfully notified that we no longer continue to take Bills of the above bank in payment for subscriptions. The issues of all other solvent specie paying Banks in the Southern States will be taken at par, as usual.

TO CORRESPONDENTS.—"Quinati;" E. J., of Horse Pen, Ala.; J. T., of Hancock co., Ga., and many others will appear in our next.

TO KEEP BEANS, ENGLISH PEAS, &c., FOR SEED.

Messrs. EDITORS—After drying them thoroughly, put them in glass bottles, or, if in large quantities, in jugs of earthen or stone ware; add to a common quart bottle a teaspoonful of spirits of turpentine—a gallon jug does not require much more. *Keep it tightly corked* and the atmosphere within is fatal to all insects. A lump of gum camphor is as good as the spirits of turpentine.

WM. N. WHITE.

Athens, Ga., Jan., 1855.

Dr. EBEN WIGHT, of Boston, will accept our thanks for

"Reports of the Committees of 1854, of the Massachusetts Horticultural Society, with the Schedule of Prizes for 1855."

Hon. AARON V. BROWN, of Tennessee, has our thanks, also, for an "Agricultural Address" delivered at Knoxville, last October. It is a very interesting and eloquent production, and has been widely read and admired.

THE NATIONAL POULTRY SHOW.

THE second Annual Fair of the National Society for the Improvement of Domestic Poultry, was opened at the American Museum in this city yesterday. Over 600 coops have already arrived, and this number will be increased to-day, it is thought, to at least 1000. The assortment of poultry is very large and rich, and embraces almost every known species. The Mandarin Ducks imported by Mr. Giles, of Connecticut, are particularly attractive. This show will be far superior to the previous one, and indeed to anything of the kind ever before held in this country, and will no doubt attract a large number of visitors.—*New York Times, of January 10.*

IMPORTED DEVON CATTLE.

By the steamship Washington, one Devon bull and three Devon cows arrived at this port last week, for Mr. Richard Peters, of Atlanta, Georgia. These animals were selected for Mr. Peters, in England, by Mr. Davy, and are choice specimens of the breed. They were chosen more particularly for great milking qualities, Mr. Peters preferring such only as have proved their superiority at the pail. He thinks these animals will rank among the best in that respect ever imported into this country.

These Devons are very fine in all their points, of good size and constitution, and will unquestionably prove a great acquisition to the improved stock of Georgia. They were forwarded, in excellent condition, to Mr. Peters, by the steamship James Adger, for Charleston, on Saturday last.—*Am. Agriculturist*.

We had the pleasure of inspecting the above animals on a recent visit to Atlanta, and cannot but regard them in all "points" as very superior. They were selected by one of the very best judges of Devons in England (himself a noted breeder of prize stock); and, added to the fine herd previously owned by Mr. PETERS, constitute the most valuable collection of *milking Devons* in America. We speak advisedly in claiming this high merit for our model Georgia herd, being fully cognizant of the rigorous taste which has governed all the purchases of Mr. PETERS for the last five or six years. Acting upon the true principles that *beef* and *milk* do not go together, he has in all cases given the latter the preference, and the result is, unquestionably, such as we have stated, viz: that he has succeeded in building up a herd of the purest North Devons, *superior in point of uniform milking properties* to any on this side of the Atlantic. For this service he deserves well of his country, and of the South especially, and should receive the thanks and generous support of all lovers of improvement.—Eds.

AGRICULTURE IN LIBERTY COUNTY, GA.—The Committee on Premiums of the Liberty County Agricultural Society suggest that a Silver Pitcher and Goblet, value fifty dollars (\$50), be offered to the Planter who makes the most per hand, of Cotton, Corn, and Rice, valuing the cotton at 20 cents per pound, and the corn and rice at 80 cents per bushel. The quantity sent to market to be testified by account sales, and that of balance kept at home, by measurement, under the supervision of a Committee, as heretofore. That a prize of seventy-five dollars (\$75), be offered for the discovery of a useful and practicable preventive to the depredations of the "*Heart Worm*," (*omophron labiatum*), to be tested by a trial of three consecutive years. That for this purpose the sum of \$25 be annually reserved until the whole amount is obtained.

DEVON CATTLE.

THE following statement of LEWIS G. MORRIS, Esq., of Mount Fordham, Westchester co., New York, is from the Report of the Commissioner of Patents. It may be proper to remark that Mr. MORRIS, and most of the Northern breeders, have, in their late importations, drawn quite heavily on the English "beef Devon" herds, which, though of faultless symmetry, are, of course, not noted for their performance at the milk pail:

"The Devons, in color, are invariably red, with the tip of the tail white, and have long horns. They are peculiarly adapted for working oxen, as their temper, and sprightliness of action, if properly broken, will perform any farm work as quick as horses. As a dairy stock, I

do not think they rank very high; but there are always exceptions to a general rule, and I have seen very good dairy stock among them. For beefing qualities, they lack early maturity; but the quality of the beef is far superior to the short-horn, and they may be kept in almost any climate, and will stand a poor farm and carelessness of treatment as well as any breed I know. If obliged to roam over a large tract of land to collect their pasture, their agility enables them to do so without worrying off their flesh. They are a pure and distinct breed, but were not a Herd-Book animal before 1851."

In order that all exhibitors at the late Fair, successful and unsuccessful, may receive due credit for their valuable contributions, we publish the following:

COMPLETE LIST OF ENTRIES

Of all articles in every Department of the Ninth Annual Fair of the Southern Central Agricultural Society, held in Augusta, Ga., during the week, commencing on Monday, December 4, 1854.

[Copied, by permission, from the Books of the Society.]

FIELD CROPS.

Lewis A. L. Boisclair, Richmond co., Ga., for largest variety and largest Turnips and largest yield.

T. P. Jones, Green co., Ga., for largest crop Cotton produced from 2 acres of Upland.

Davis, Kolb & Fanning, Augusta, Ga., 1 box Gaston & Gordon's Virgin Leaf Chewing Tobacco.

J. E. Burch, Richmond co., Ga., for largest yield Australia Wheat.

W. F. Butler, Locust Hill, N. C., two $\frac{1}{4}$ boxes Chewing Tobacco (natural) Engine brand; one $\frac{1}{2}$ box Chewing Tobacco, G. A. Smith's brand; one $\frac{1}{2}$ box Chewing Tobacco, S. B. Jennings' brand.

Middleton Seago, Richmond co., Ga., for 1 acre largest yield Sweet Potatoes, certificate deposited; 1 acre variety Sweet Potatoes.

Dr. E. R. Ware, Athens, 1 bale Pea Vine Hay.

Washington W. Stone, Columbia co., Ga., 2 bushels best variety Sweet Potatoes; 1 bushel variety Peas; 1 peck Grass Nuts.

R. J. Butler, Hamburg, 1 bushel Oats.

W. A. Lenoir, Lenoir, Tenn., 1 bushel Oats.

Henry P. Hampton, Columbia co., 1 acre sweet Potatoes, yams; 1 bushel black winter Oats.

W. A. Lenoir, Roane co., Tenn., 1 acre largest yield Oats.

R. C. Daniel, Oglethorpe county, Ga., 1 bushel quality White May Wheat; 1 bushel quality White bearded May Wheat, short; 1 bushel quality Red May Wheat; 1 bushel quality late Australia Wheat.

R. Peters, Atlanta, Ga., 1 bushel nepaul; or bearded Barley; 1 bushel Huntsville or Winter Barley; 1 bushel Winter Oats.

James Bass, Hancock, 1 bushel Wheat.

Edward J. Shepherd, Muscogee, 1 acre of Sweet Potatoes, with a certificate.

A. Griffith, Oglethorpe, Ga., 1 acre Sweet Potatoes, with a certificate.

J. L. Dimon, Muscogee co., 1 acre Ground Peas.

BOYS CROPS.

Young H. Wynn, Habersham co., 1 acre Corn, 108 bushels and 9 quarts.

Alfred W. Shaw, Richmond co., 1 acre of Corn, 20 bushels and 22 quarts.

Geo. F. Harrison, Chatham co., 1 acre Corn, 41 bushels and 5 quarts.

SAMPLES OF FIELD CROPS.

Dr. John M. Turner, Augusta, Ga., 1 sack Bread Corn; 1 sack Stock Corn.

C. T. Shelman, Stilesboro, Cass co., Ga., 1 bushel white Wheat, by Beall & Stovall, Augusta, Ga.

G. M. Magruder, Columbia co., Ga., 1 bushel Oats.

M. M. Anderson, Gordon co., specimen one sack Corn in ears.

Cunningham Mills, Augusta, half bushel Tubman Wheat; half bushel Chili Wheat; half bushel white Wheat; half bushel Red May.

John W. Teneh, Paris, Coweta co., Ga., 1 bushel stock Corn.

A. Pope, Sr., Washington, Wilkes co., 1 bushel Carter or

Mercer Irish Potatoes; 6 Mangoes, a new vegetable; 1 lot of seed for Garden Vegetables.

A. Griffith, Oglethorpe co., 2 bushels Turnips; 2 bushels Sweet Potatoes.

G. Volger, Augusta, Ga., 2 boxes Tobacco; half barrel Tobacco; 1 roll Smoking Tobacco; 1 box fine cut Tobacco; 2 canisters Tobacco; 24 papers Smoking Tobacco; 4 boxes Segars.

Wm. J. Eve, Richmond county, Ga., 1 bushel ground Peas; 1 bushel Bread Corn.

Dr. Geo. Battey, Rome, Ga., 1 bushel best Irish Potatoes, Southern raised.

Geo. W. L. Twiggs, Richmond co., Ga., 2 bushels Bread Corn.

Young H. Wynn, Habersham co., 2 bushels Breed Corn. Alfred W. Shaw, Columbia co., 2 bushels Bread Corn.

John Dimon, Muscogee county, 1 bushel Rye. John Dimon, Muscogee county, 1 bushel Barley.

Middleton Sargo, Richmond co., 1 bushel field Peas, as largest yield and best variety.

David Dixon, Covington, Ga., 30 Cotton Stalks, Boyd's Extra Prolific.

COTTON BALES.

A. Pope, Sr., Wilkes, co., 20 bales Upland Cotton; 10 bales Upland Cotton; 5 bales Upland Cotton; 1 bale Upland Cotton.

W. W. Stone, Columbia co., 5 bales Upland Cotton; 1 bale Upland Cotton.

D'Antignac, Evans & Co., for Henry P. Hampton, Columbia co., 1 bale Upland Cotton, imported Petit Gulf Cotton Seed; 5 bales Upland Cotton, imported Petit Gulf Cotton Seed.

Dr. J. S. Whitin, Hancock co., 20 bales Cotton.

A. J. Lane, Warrenton, Ga., 9 bales Upland Cotton; 20 bales Upland Cotton; 10 bales Upland Cotton; 5 bales Upland Cotton.

Dr. T. P. Janes, Green co., Ga., 20 bales Upland Cotton; 10 bales Upland Cotton; 5 bales Upland Cotton; 1 bale Upland Cotton.

R. J. Willis, Green co., Ga., 20 bales Upland Cotton; 5 bales Upland Cotton.

Jno. Spear, Abbeville, S. C., 5 bales Upland Cotton.

Geo. W. L. Twiggs, Richmond co., Ga., 5 bales Upland Cotton; 1 bale Upland Cotton.

T. J. Smith, Hancock co., 20 bales Cotton.

CATTLE.

FIRST CLASS.—DEVONS.

M. M. Anderson, Gordon co., 1 Devon Bull, Calhoun, 2 to 3 years old.

J. W. Watts, Cass co., 1 Devon Bull, 2 years old.

M. M. Anderson, Adairsville, Cass co., 1 Blooded Bull, 2 years old.

Col. A. G. Sumner, Alston, S. C., 1 Devon Heifer, Alice, 1½ years old, bred by R. Peters.

R. Peters, Atlanta, entered the following:—Bull, Eclipse, 2½ years old, calved April, 1852; Bull, Springfield, 1½ years old, calved May, 1853; Cow, Splendid, 3½ years old, calved May, 1851; Cow, Loadstone, 3 years old, calved December, 1851; Heifer, Mary, 1½ years old, calved Feb., 1853; Heifer, Lizzy 3rd, 1 year and 8 months old, calved April, 1853; Heifer Calf, Jenny Lind 2nd, 9 months old, calved March, 1854; Bull Calf No. 1, 1 year old, calved Dec. 3, 1853; Bull Calf No. 2, 10 mos. old; Bull Calf No. 3, 10 months old, calved Feb., 1854; Bull Calf No. 4, 9 mos. old, calved March, 1854; Bull Calf No. 5, 8 months old, calved April, 1854; Bull Calf No. 6, 8 months old, calved April, 1854; Bull Calf No. 7, 7 months old, calved May, 1854; Bull Calf No. 8, 7 months old, calved May.

SECOND CLASS.—DURHAMS.

J. W. Watts, Cass co., 1 Durham Bull, 1 year old.

A. S. Lenoir, Loudon, Tenn., 1 Durham Cow, 10 years old; 1 Durham Calf, 6 months old; 1 Durham Bull, 8 years old.

Dr. Whittin, Hancock co., 1 Durham Bull, 3 yrs. old.

THIRD CLASS.—AYRSHIRES.

R. Peters, Atlanta, entered the following:—Cow, Minie, 8½ years old, calved June, 1851; Cow, Janet, 3½ years old, calved June, 1851; Heifer, Snow Drop, 2 years and 11 months old, calved Jan., 1852; Heifer, Bessie, 2 years and 10 months old, calved Jan., 1852; Heifer, Paragon, 1½ years old, calved March, 1853; Heifer, Marie Louise, 1½ years old, calved March, 1853; Bull, Sir Walter, 1 year old, calved Nov., 1853.

A. Griffith, Oglethorpe, co., 1 Bull, 6 years old.

GRADES.

Aaron Roff, Calhoun, Ga., 1 Milch Cow, mixed breed; 1 Milch Cow, 2 years old; 1 Heifer, mixed breed, 9 months old; 1 Heifer, mixed breed 6 months old.

R. Peters, Atlanta, Heifer Calf, 10 months old, dam a Washborn grade Devon; sire Baltimore; Bull Calf, 10 mos. old, dam Nicey, half Devon, ½ Durham and ¼ Ayrshire, a great milker, giving over 20 quarts per day on grass pasture; sire Baltimore.

Phineas Butler, Augusta, 1 Milking Cow (native) named Tacker; 2 Milking Cow (native) named Pink.

Wm. J. Eve, Richmond co., 1 Cow with twin Calves.

WORKING OXEN AND FAT CATTLE.

W. T. Lightfoot, Macon, Ga., 1 yoke Working Oxen, 6 years old, Georgia raised. Native stock.

A. S. Lenoir, Loudon, Tenn., 2 fat Heifers, grass fed.

HORSES.

HOUSES OF ALL WORK.

W. H. Harris, Richmond co., 1 Stallion, Eclipse.

Alexander M. Brown, Morgan co., 1 Stallion, Herman.

John Dowse, of Burke co., Ga., 1 Stallion, horse of all work.

W. H. Harris, of Richmond co., 1 Horse Colt, 1 year old, called Charles May.

John C. Hill, Lawrence Dis., S. C., 1 Filly, 2 years old; 1 Horse Colt, 1 year old.

James Millican, Jackson co., Ga., 1 Chestnut Sorrel Colt, 8 years old; 1 Bay Horse Stallion.

A. S. Lenoir, Tennessee, 1 Mare, 8 years old; 1 Filly, 8 years old.

J. L. Hurst, Athens, Tenn., 1 Bay Mare, 4 years old; 1 Bay Filly, 2 years old.

W. H. Harris, Richmond co., 1 Stallion, 5 years old; 1 Colt, 1 year old.

J. M. Davidson, Woodville, Ga., 1 Filly, 4 years old, sired by Groundhog.

M. M. Anderson, of Gordon co., 1 Brood Mare and Colt; 1 Filly, 1 year old.

H. B. Houck, Cass co., 2 Brood Mares; 1 one year old; 1 Saddle Horse.

James Millican, Jackson co., 1 Brood Mare with a Colt by her side.

S. Welbank, Jackson co., Ga., Harmony Grove, 1 Harness Horse.

E. S. Taylor, Oglethorpe co., 1 one year old Colt.

J. C. Lumpkin, Newna, 1 Single Harness Horse.

James S. Morris, Marietta, 1 pair of Horses, and 4 Single Horses.

S. Clark, S. C., 1 Stallion over 4 years old.

James Millican, Jackson co., Ga., 1 Black Mare and Colt.

J. V. Martin, Richmond co., Augusta, Ga., 1 Harness Horse.

George T. Anderson, Newnan co., Ga., 1 Harness Horse.

G. M. Magruder, Columbia co., Berzela, 1 Brood Mare and Colt.

William Brown, McBean, P. O., 1 Brood Mare and Mule Colt by her side.

H. T. Thompson, Colt, 1 year old.

B. Thornton, Jackson co., 2 year old Filly.

E. G. Tomlin, Cass co., 2 year old Filly.

SECOND AND THIRD CLASSES.—HEAVY DRAFT AND BLOOD HORSES.

Thos. W. E. Beall, one pair Matched Horses.

Benjamin Robertson, Kentucky, do do.

George T. Allman, Cornersville, Tenn., one pair Matched Horses.

BLOOD HORSES.

J. Still, Walton co., one Stallion, ten years old.

L. B. Hays, Walton co., one Stallion, 5 years old.

J. W. Henderson, Cass co., one Stallion, 3 years old.

Samuel L. Heald, Gwinnett, Ga., one Horse Colt, 2 years old.

A. C. Hawthorn, Abbeville, S. C., one Stallion, 5 years old.

H. J. Thompson, Morgan co., one Mare Colt, 1½ year old.

J. B. Sorrels, Walton co., one Stallion, 3 years old.

Thos. W. E. Beall, Richmond co., Elizabeth McNeiry, brood mare and colt; Thos. brood mare and colt.

C. Y. Wilkerson, Wrightsboro, Columbia co., one Colt.

J. W. Dabney, Tallahassee, Fla., one Stallion, De Leon.

Thomas G. Bacon, Edgefield C. H., S. C., one bay Horse, Gamble; one bay Horse, Jim; one bay Mare, Helen.

Young J. Long, Newnan, Coe do., one blooded Filly, 3 years old.

Robert Hambricht, Bradley co., Tenn., one Stallion, 6 yrs. o d, named Peacock; one Stallion, 2 years old.

W. H. Wellerby, Bradley co., Tenn., one Filly, 2 years old.

W. C. Jones, Richmond co., one sorrel Gelding.

Aquila Miles, Edgefield, S. C., one Colt.

G. W. Lamar, Augusta, one sorrel Filly, 2 years old.

Col. George Elliott, Tenn., one bay Filly, 1 year old; one chestnut Filly, 1 year old; one Colt, 2 years old; one Horse

Colt, 3 years old; one Mare, 5 years old; one Colt, 2 years old.

B. Thornton, Harmony Grove, Jackson co., one 2 year old Filly.

Thomas G. Hester, Clark co, Ga., one bay Colt, 3 years old, saddle horse.

Power & Peacock, Cartersville, Cass co, Ga., one pair Horses; one single harness Horse, Southern raised; two Saddle Horses, Southern raised.

H. B. Houck, Cass co., one brood Mare; one Filly, 3 yrs. old.

George T. Anderson, Newnan, Coweta co., one bay Mare. Carson Warren, Edgefield Dist., S. C., one blood Horse, 2 years old.

FOURTH CLASS.—MORGAN, CANADIAN AND IMPORTED HORSES. (No entries.)

FIFTH CLASS.—MATCHED AND SINGLE HORSES.

Southern Raised Horses.

Benjamin Robinson, Ky., one pair of matched horses.

R. G. Tomlin, Cass co., one harness horse.

Benjamin Robinson, Ky., one single harness horse.

Alexander A. Cingam, Bradley co., Tenn., one bay gelding, 8 years old; one do 4 years old.

Col. George Elliott, Tenn., one pacing colt, 8 years old.

William H. Bonner, Hancock co., one pair of matched horses; one single horse.

Joseph M. Williams, Clark co., Ga., one harness horse, single.

D. W. K. Peacock, Cartersville Ga., one single harness horse; one saddle do.

D. Demarest, Atlanta, one single harness horse.

William G. Rice, Waterboro, S. C., one single harness horse.

W. A. Mott, Milledgeville, one single harness horse.

George W. L. Twiggs, Richmond co., one single harness horse.

George T. Allman, Tenn., two saddle horses.

Georgia Raised Horses.

R. G. Tomlin, Cass co., one filly.

W. Tumlin, Cass co., one horse colt, 2 years old.

James A. Price, Clark co., one pair matched horses, iron greys; one do blacks.

M. E. Hoggie, Atlanta, Ga., one harness horse.

W. M. Dorman, Gordon co., one harness horse.

W. A. Mott, Milledgeville, one single harness horse, Southern raised.

M. H. Har en, Cass co., one pair matched horses.

D. W. K. Peacock, Cartersville, Ga., one pair matched horses; one saddle horse.

W. M. Verdery, Jefferson co., one saddle horse.

Wm. J. Eve, Richmond co., one stallion colt, 2½ years old; one horse colt, gelding, 3 years old.

Jas. P. Wynn, Clark co., saddle chest filly.

M. Mann, Richmond co., chestnut horse.

William H. Bonner, Hancock co., one pair of matched horses, open to the world.

John H. Tripp, Augusta, Ga., one pair matched horses, open to the world.

JACKS AND JENNETTES.

David Crockett, Public Square, Green co., one Jack, Georgia raised.

Shaw & Curry, Edgefield Dist., S. C., Jack, Tippecanoe.

Mat hew Reese, Warren co., one Jack, 5 yrs old.

MULES.

Georgia and Southern Raised.

W. B. Che sebroough, Burke co., one Mule Colt, 8 months old.

G. M. Magruder, Berzelia, Columbia co., one Georgia raised Mule.

Orme & Alexander, Atlanta, two pair Mules; one single Mule.

D. N. Heath, Danville, Ky., one pair Mules, Southern raised.

R. J. Butler, Edgefield Dist., S. C., four young Mules, raised in Carolina.

A. Griffith, Oglethorpe co., one pair Mules.

SHEEP.

FIRST CLASS.—MERINOS.

J. W. Watts, Cass co., pen of Merino Sheep; pen of Merino Sheep; third largest lot or pen owned in Georgia.

SOUTHDOWN SHEEP.

R. Peters, Atlanta, entered:

Lot No. 1.—Buck three years old; bred by L. G. Morris, from his imported stock.

Ewe 2 years old; bred by C. Haight, of New York.

Lamb 9 months old, bred by Richard Peters.

Lot No. 2.—Buck 1 year old; bred by Richard Peters.

Ewe 2 years old, bred by C. Haight, of New York.

Lamb 7 months old, bred by Richard Peters.

Lot No. 3.—Lot of buck Lambs, 9 to 10 mo's old.

Three Fleeces Southdown Wool.

FIFTH CLASS.—NATIVE AND GRADES.

J. W. Watts, Cass, Pen consisting Ram, Ewe and Lamb.

J. W. Watts, Cass co., 1 pen of Broad tailed Sheep.

J. W. Watts, of Cass co., 1 French Merino Buck.

J. W. Watts, Cass co., 8 fleeces Merino Wool; 8 half Merino Wool.

FAT MUTTON.

J. C. Sproull, Cass co., Pen of Fat Mutton.

CASHMERE, THIBET, OR PERSIAN GOATS.

Dr. J. B. Davis, Columbia, S. C., one Cashmere Buck, 4 years old; one do 2 years old; one do 1 year old; one do 4½ months old; one Ram native crossed on Cashmere, 5 mos.; one do 5 mos.; one Ewe do 7 mos. old.

J. E. Burch, Richmond co., two pairs common goats.

SWINE.

FIRST CLASS.—SUFFOLKS.

R. Peters, Atlanta, Ga., Lot No. 1, Sow 20 mos. old, bred by L. G. Morris, of Fordham, N. Y., from his imported stock of Windsor Suffolks; Lot No. 2, Sow 10 months old, bred by R. Peters, from the L. G. Morris stock; Lot No. 3, Sow 8 months old, bred by R. Peters, from the L. G. Morris stock; Lot No. 4, 8 Pigs 2½ months old, bred by R. Peters, from the Morris stock.

SECOND CLASS.—GRAZERS.

R. Peters Atlanta, Ga., Lot No. 1, Boar 4 months old, bred by R. Peters; Lot No. 2, Boar 4 months old, bred by R. Peters; Lot No. 3, Sow 1½ years old, bred by R. Peters; Lot No. 4, Sow 1 year old, bred by R. Peters; Lot No. 5, Sow 6 months old, bred by R. Peters; Lot No. 6, 6 Pigs 3 mos. old, bred by R. Peters.

BLACK ESSEX.

R. Peters, Atlanta, Ga., Lot No. 1, Boar 1 year old, bred by L. G. Morris; Lot No. 2, Boar 7 mos. old, bred by R. Peters; Lot No. 3, Sow 1 year old, bred by L. G. Morris; Lot No. 4, Sow 7 mos. old, bred by R. Peters; Lot No. 5, Sow 7 months old, bred by R. Peters.

THIRD CLASS.—BERKSHIRES.

[No entries.]

FOURTH CLASS.—NATIVES AND GRADES.

D. Kirkpatrick, Sr., Augusta, one fat hog, and one sow.

John Berdge, Cobb co., Ga., one fat hog.

Floyd Thomas, Augusta, Ga., one fat hog, 6 mos. old; one do 18 mos. old.

Dr. W. E. Dearing, Augusta, Ga., largest and fattest hog, for age, Georgia raised; one sow and pigs, grade; one sow, grade; one boar, Welborn and Graziar, 13 mos. old.

Floyd Thomas, Richmond co., Ga., one Berkshire sow, 14 mos. old.

R. Y. Butler, Edgefield Dist., S. C., one large young hog.

Phineas Butler, Augusta, Ga., one pig, 11 mos. old, 332 pounds weight.

Col. A. G. Sumner, Alston, S. C., 1 Suffolk Boar, Morris stock.

Wm. E. Dearing, Augusta, Ga., one large hog.

POULTRY, PIGEONS AND BEES.

W. H. Thurmond, Atlanta, 20 coops Brahma Pootra Fowls.

D. Redmond, Augusta, 45 coops Brahma Pootra Fowls; also, Cochins, China, Grey Chittagong, and Game Fowls, African or Hong Kong Geese, Chinese Geese.

For the largest and best variety of barn yard and domesticated Fowls owned and exhibited by one person, D. Redmond offered the following:—Brahma Pootra, Grey Chittagongs, C. chin Chinas, Shanghai, Georgia Game, Earl of Derby Game, Irish Grey or Shawl Neck Game, African Bantams, Java Bantams, and Sumatra Game Fowls; Hong Kong Geese, Chinese Geese.

Mr. Carlos DeLaigle, Richmond co., Ga., 1 pair Wild Tukeys.

Robert G'over, Richmond co., Ga., Game Cock.

Floyd Thomas, Richmond co., 1 pair Chittagong Fowls; 1 pair Shanghai Fowls; 1 pair Brahma Pootra; 1 Game Cock and Hen; 1 pair Black Java Fowls.

J. Pervis, Richmond co., 1 pair Chivalric.

J. E. Burch, Richmond co., 1 pair Ducks, and 1 Game Cock and 8 Hens.

Master Joseph S. Dawson, Chatham co., 40 pair of Fancy Pigeons.

Jas. H. Carter, Gordon co., several pairs Sumatra Game Fowls.

J. W. Watts, Cass co., 1 pair Mexican Game Fowls.

J. W. Watts, Cass co., 1 pair Chinese Geese.

J. C. Sproull, Cass co., 1 pair Great Chinese Geese.

V. LaTaste, Augusta, Ga., Cochins China Fowls.

V. LaTaste, Augusta, Ga., 1 lot Brahma Pootra Fowls.

Beverly Walker, Richmond co., Piney Woods Turkey.

W. J. Mims, Richmond co., Shanghai Cocks and Hens.
 W. J. Mims, Richmond co., Shanghai Fowls, 1 Cock and 2 Pullet.
 G. W. Hall, Richmond co., 1 pair Cochon China Fowls.
 Jacob Sistrunk, Richmond co., 1 Turkey.
 W. J. Mims, Richmond co., 1 coop Shanghai Chickens,
 1 Cock and 2 Hens.
 R. H. Gardiner, Jr., Richmond co., 4 Bremen Geese, 1 Gander and 8 Geese.
 G. W. L. Twiggs, Richmond co., several coops Brahma Pootra Chickens.
 M. E. Hoggie, Atlanta, Ga., 1 pair White Game Chickens, Cherokee.
 G. Renkle, Augusta, 8 Shanghai Fowls, 1 coop.
 Geo. A. Oates, Augusta, Ga., 5 Poland Ducks; 1 lot of Lop Eared Rabbits; 2 Hong Kong Geese; 2 Bremen Geese; 1 Game Cock.
 Richard Peters, Atlanta, Ga., 2 pair Madagascar or Lop Eared Rabbits.
 Phineas Butler, Augusta, Ga., 1 pair Grey Chittagong Fowls; 1 coop mixed Fowls.
 Col. A. G. Summer, Alston, S. C., 1 pair Hong Kong Geese; 1 pair Wild Geese; 1 pair Bantam Fowls; 1 coop Southern raised Dorkings.
 Mrs. Emily Ford, Augusta, 1 pair Wild Turkeys.
 Mr. Wm. Schley, Augusta, one pair Muscovy Ducks.
 Dr. J. B. Davis, So. Ca., 1 pair Turkeys, White.
 D. Redmond, Augusta, Ga., largest variety of Fowls.
 V. LaTaste, Richmond co., 1 Hive and Bees.
PORK, BACON AND BEEF.
 Mrs. Lenoir, Roane co., E. Tenn., 1 Bacon Ham; 6 Bacon Hams; 6 Bacon Sides.
 Thos. P. Stovall, Augusta, Ga., 1 quarter of Beef raised by M. A. Cooper of Etowah, Ga.
 Mrs. P. A. Summey, Athens, 2 Bacon Hams.
DAIRY AND HOUSEHOLD DEPARTMENT.
 Mrs. Ann E. Wynn, Habersham co., Ga., 1 jar Fresh Butter, 10 lbs.
 Mrs. I. T. Lenoir, Sweetwater, E. Tenn., 1 can Lard.
 D. Redmond, Augusta, Ga., 6 bottles Wine from the Weller Vineyard, N. C.
 Mrs. A. J. Lane, Hancock co., collection of Preserves, Jellies, Catsups, Pickles, &c.
 Mrs. E. W. Sproull, Cass co., one kit of fresh Butter.
 Mrs. Jos. McAlpin, Upson co., 20 lbs Hard Soap.
 Rev. Richard Johnson, Atlanta, one bottle S. C. Olives; one bottle Orange Wine.
 Mrs. Wm. J. Eve, Augusta, 1 jar of Soft Soap; 1 tub of Hard Soap; one jar of Lard; one loaf of Bread; one glass jar of Butter.
 Mrs. E. Harris, Columbia co., two cakes Hard Soap, 20 lbs.; one boiled Ham, skin on.
 Thos. G. Lamar, Augusta, one jar of Lard.
 Mrs. J. H. Anderson, Augusta, two Otomans.
 J. M. Davidson, Woodville, for Mrs. Thomas J. Britton, Fire Soap, Southern made.
 Mrs. T. J. Smith, Balah, Hancock co., 80 lbs Lard; 7 varieties Pickles; 5 Catsups; 5 varieties Cordials; 2 Syrups; 5 Jellies; 25 varieties Preserves and Jams.
 Wm. J. Eve, Richmond co., one bushel Meal; one bushel Grits.
 Miss Sally Cade, Ebert co., 6 jars Preserves; a jar of fine Glass Melons.
 Mrs. V. LaTaste, one bottle Vinegar.
 Louisa Jackson, one Sponge Cake.
 Mrs. Edward R. Harden, Athens, one jar Mustard Pickle.
 Mrs. Dr. A. Means, Oxford, 3 jars Water Melon Preserves; one jar Peach Pickles; one jar Mustard Pickles; one jar Green Pickles; one jar Cherry Pickles; one jar spiced Tomato Pickles; one jar blue Cabbage Pickles.
 Mrs. John Turpin, Augusta, Preserves in showcase; collection of Water Melon, Tomato, Glass Melon, May Apple, &c.
 Mrs. B—L—, Roane co., East Tenn., one bushel of Dried Apples.
 Mrs. Gen. Flournoy, Richmond co., Ga., one jar Dried Figs; two bottles Geneva Wine.
BABIES.
 [Fund for premiums contributed by several citizens of Augusta.]
 E. D. Glover, Augusta, Ga., one Daughter, 2 years old
 Augustus M. Cox, M. D., Abbeville, S. C., one Son, 1 year old.
 Dr. W. E. Dearing, Augusta, Ga., one Son, two years old on the 9th Dec. 1855.
 John Livingston, Richmond co., one Son, 3 months old.
 J. F. Turpin, Richmond co., one Daughter, 2½ years old.
 W. V. Keener, Augusta, Ga., one Daughter, 1 year old.

Mrs. D. B. Plumb, Augusta, Ga., one Son, 8 months old.
 Gerald McLaughlin, Augusta, Ga., one Son, 15 months old.
SOUTHERN DOMESTIC MANUFACTURES.
 Mrs. Dimon, of Muscogee co., one pair Socks.
 Mrs. E. M. Sproull, Cass co., 1½ yards Jeans.
 Mrs. Rebecca Sproull, Cass co., one pair Merino Stockings.
 Mrs. J. C. Sark, Hamburg, S. C., one Bed Quilt.
 Mrs. J. W. Henderson, Cass co., one coverlet.
 George T. Allman, Corneraville, Tenn., 10 yards Woollen Jeans.
 Mrs. J. A. Clark, Social Circle, one Counterpane; two pair Stockings.
 Mrs. Nancy Hackle, two quilts.
 Mrs. Thomas Gardiner, Augusta, Ga., one Woollen Coverlet.
 Mrs. Rowland, Cass co., 14 yards Rag Carpeting; 10½ yards Rag Carpeting; 82 yards Cotton Draping, in three pieces; 2 green figured Coverlets; 1 white figured cotton Counterpane; 15½ yards black Woollen Jeans; 8½ yards brown Woollen Jeans; 12 yards brown Woollen Jeans; 11 yards double and twist half wool Negro Cloth; 1 pair mixed cotton Socks; 2 pair white cotton Socks; 1 dark figured woollen Cover; 12 ark woollen Negro Cloths.
 Miss E. Smith, Tattnall co., sample of Silk Cloth.
 Mrs. R. D. Glover, Richmond co., one raised work Quilt.
 J. K. Dukes, Abbeville, S. C., one Quilt.
 F. H. Skinner, Richmond co., one Quilt.
 Mrs. Wright, Sweet Water, Tenn., one Quilt.
 Amena Shryock, Sweet Water, Tenn., one Quilt.
 Mrs. B. C. O'Neil, Lincoln co., one Quilt.
 Ann S. Brown, Cobb co., two quilts; two Counterpanes.
 Mrs. J. H. Anderson, Augusta, one Quilt.
 James T. Gray, Marietta, one Quilt.
 Mrs. Thomas J. Asher, Holy Creek, Ga., five Woollen Blankets.
 Mrs. Archer Griffith, Brookline, Ga., 13 yards Woollen Jeans, home made; one Woollen Coverlet, home made.
 P. A. Summey, Athens, Ga., 200 Bobbins, Quilts, &c., for Factory use.
 Mrs. Rowland, Cass co., Ga., one pair white Woollen Socks.
 Ladies' Benevolent Society of Chattooga, near Summer-ville, one laid-work Quilt.
 Mrs. H. S. Nott, McBean, Richmond co., three Quilts.
 Mrs. William Gregg, Charleston, S. C., one Silk Quilt.
 Miss Rosa C. Gregg, Charleston, S. C., one Crotchett Tidy.
 Miss Martha A. Alfriend, White Plains, Greene co., two Counterpanes.
 Mrs. Samuel Glenn, Philomath, Oglethorpe co., 7 Fly Brushes.
 Mrs. Moody, Greene co., one pair Lamb's Wool Socks.
 Mrs. Thomas Fleming, Augusta, one needle worked Chair Cover.
 Mrs. E. Horton, Augusta, one patch-work cotton Quilt; one piece Homespun; one patch-work Quilt; two Counterpanes.
 Mrs. Sally Greene, Hancock co., one Nett Counterpane.
NEEDLE, SHELL AND FANCY WORK.
 Miss Julia S. Baudry, Augusta, Ga., four pieces Embroidery.
 Mrs. J. E. Whitcomb, near Hamburg, one patch work cotton Quilt.
 Mrs. Sally F. Lane, Washington, Ga., one Silk Mantle.
 Mrs. Wingfield, Wilkes co., one imitation Marseilles Quilt.
 Miss Lee, Wilkes co., one imitation Marseilles Quilt.
 Mrs. Ann E. Shackelford, Augusta, 1 silk Patch work Quilt.
 Mrs. Hamilton Barge, Newton co., Ga., one Infant's needle-work Cloak.
 Mrs. M. P. Jones, Washington, Wilkes co., Ga., one infant's needle-work Dress.
 Mrs. E. S. Andrews, Abbeville Dist., S. C., one wreath of Hair Work.
 Mrs. H. A. Lane, Hancock co., one nett Counterpane.
 Mary Brett, Richmond co., one Shirt.
 Mary E. Hooke, Sear and Purse Crotchett.
 Mrs. Mary E. Brady, Columbia, S. C., one worsted Table Cover.
 Mrs. Neeson, Augusta, one Infant's Dress.
 Mrs. L. A. Shelton, Ogechee P. O., Scriven co., one Side board Cover; one Chair Cover; one Wash-board Cover; one Cake Cover; one white Quilt; one rising-sun Quilt; one large work Quilt.
 Miss E. W. Graves, Newton co., one child's Sack; one little boy's Cloak.

Mrs. Carey, 1 very large purple Egg Plant, 22 inches in circumference.

Mrs. Carey, Chunnennugee, Ala., lot very large Turnips; half dozen Pomegranates.

Col. J. Carter, Chunnennugee, Ala., 2 large water melons; lot large beets.

Mr. Hugh J. Kennedy, Atlanta, variety of garden vegetables for table use.

J. S. Clarke, very large turnips.

W. W. Stone, 2 bushels sweet potatoes, Mexican variety.

Middleton Seago, Richmond co., large lot sweet potatoes, 7 varieties; 1 bushel flat Dutch turnips; ot fine large Norfolk turnips.

A. euer Griffith, Oglethorpe co., 1 lot large sweet potatoes, yams, grown, raised 312 bushes the acre this year; 2 bushels turnips, Norrick and flat Dutch.

Louis A. L. Boisclair, Richmond co., 6 bushels turnips, 6 varieties, Red Top, Russian, Flat Dutch, Kata Baga, large White Globe, and 1 not named.

E. V. Shepherd, Columbus, 1 lot very large sweet potatoes, yellow Spanish variety.

Robert H. Gray, Millen, Burke, co., lot turnips, Dally and Hybrid, large and fine.

R. J. Butler, Edgefield dist., S. C., 3 very large water melons.

SOUTHERN FARMING IMPLEMENTS.

A. S. Langley, Nashville, Tenn, 2 corn mills and crusher. James Rowe, Hillsborough, Fla., 1 crushing mill; 1 pea vine plow; 1 pair metallic cart wheels.

Moore & Dusanberry, Ray Town, Ga., 1 Cotton Gin. H. Randall & Mercer, Lee co., Ga., 1 cotton seed planter.

N. B. Moore, Augusta, 1 four horse wagon. James P. Wayne, Clark co., 1 two horse wagon.

J. T. Wait & Holland Bolton, Anderson dist., S. C., 1 cotton planter.

A. Pope, Sr., Washington, Ga., 1 leveller. A. B. Packard, 1 Cotton Press.

D. McComb, Memphis, Tenn., 1 cotton press, model. J. L. Garlington, Newton co., 1 grain thrasher.

J. W. Faucett, & Son, Columbia county, 1 Road Wagon; 1 two horse Wagon; 1 Coultter Plow.

P. A. Summey, Athens, Ga., 2 bundles Carriage Spokes. N. Warlick, LaFayette, Ala., 1 model of a newly invented Plow; a combination of Tongue and Shaft for vehicles; a plan for moving houses on three points only; 1 lot of improved Garden Tools.

Thomas J. Cheely, Hancock co., 1 Cotton Gin. F. M. Allen, Burke co., 9 Plows; 1 Thrasher.

N. Nuckles, Columbus, Ga., 1 Straw Cutter.

SOUTHERN MADE MACHINERY.

C. J. Nesbitt, Claer Spring, Washington co., Md., 1 Hominny Mill.

T. P. Stovall, Augusta? 2 Sawing Machines, made at the North; 1 Shingle Machine.

Winter's Iron Works, Montgomery, Ala., by T. P. Stovall, 1 model of Circular Saw Mills.

H. H. Camp, Cut Off, Walton co., 1 Churn; 1 Crank Wheel for saw mill.

Thomas Wynn, Richmond co., Ga., 1 fire proof patent breast Cotton Gin, Southern manufacture.

A. C. Keys, Knoxville Tenn., 1 Hand Loom. T. P. Stovall, Augusta, 1 Shingle Machine.

MANUFACTURES OF LEATHER.

Sidney Smith, Marietta, Ga., 1 lot of Harness Leather; 1 lot of Band Leather.

Isaac Ramsay, Columbia co., 1 box containing 2 doz. pairs Shoes; 6 rolls Leather, upper and sole, Southern made; 1 roll Kip Leather; 1 roll Russett leather.

George T. Allman, Cornersville, Tennessee, 1 Gentleman's Saddle.

George Elliott, Sumner co., Tenn., 1 Gentleman's Saddle. Marietta Tannery, 12 Sides Sole Leather; 12 Sides Varnished Leather; 12 Sides Bridle Leather; 6 Russett Leather, upper; 6 Sides Buff Leather, upper; 6 Sides Wax Leather, upper; 6 Wax Capes heavy upper Leather; 6 Wax Capes, light; 6 Calf Skins; half doz. Goat Skins dressed; 1 doz. Deer Skins, finished; 1 doz. and a half Deer Skins, unfinished; half a dozen Sheep Skins dressed in wool; 1 doz. pair Russel Brogaus; 1 doz pair Black Brogaus.

Hatch & Begbie, Augusta, 1 set double Carriage Harness; 1 set double Buggy Harne; 1 set single Buggy Harne.

Hatch & Begbie, Augusta, 1 Gentleman's Saddle; 1 Ladies Saddle.

MUSICAL INSTRUMENTS.

George A. Oates & Bro., Augusta, one Rosewood Piano

Forté, pattern made by Bacon & Raven, New York—seven octaves, Louis XIV style.

RECLAIMING LAND.

Middleton Seago, Richmond co., Ga., Essay upon the best method of restoring old lands.

SOUTHERN MANUFACTURES IN WOOD AND IRON. Watts & Roberson, one 4 wheel Carriage.

Stockton & Carey, one set of Buggy wheels. W. H. Goodrich, 2 Doors, 2 pair Blinds, 3 sett of Sash.

Archias & Grimand, Richmond co., 7 pieces Rustic Furniture.

Wyman & Darrow, one Carriage, exhibition only; one Trunk, exhibition only; one Valise, exhibition only; one dozen Whips; one Lady's Travelling Bag.

E. H. Rogers, Augusta, Ga., one Double barrelled Gun; 1 Rifle.

J. Johnson, Augusta, Ga., one Expanding Window Sash.

CHEMICAL MANUFACTURES, OILS, CEMENTS, MINERALS, &c.

William Phillips, Augusta, Ga., one case of Georgia Minerals.

D. B. Plumb, one fine Family Medicine Chest; one fine Physician's Chest.

A. B. Sturgis, Richmond co., Ga., 4 boxes Paint; one box Tripoli; 1 box Bath Brick; 4 bbis Paint.

John Cowan, Memphis, Tennessee, Artificial Cotton Seed Rock, and Fire Proof Roofing.

J. M. Davidson, Woodville, Ga., one box Oil Stones, from Oglethorpe county.

Wm. R. Schirmer, Augusta, one pair French Burr Millstones, 2 feet in diameter; one pair French Burr Millstones, 3 feet in diameter.

John H. Newton, Athens, one box Copper Ore, from Georgia.

Bridwell & McCue, Augusta, one pair French Burr Millstones.

Jacob R. Davis, Dahlonga, Ga., two samples of Gold Quartz.

CLOTHING.

R. Hawley, Charleston, S. C., one case of Gent's Hats.

NOTE.—In the hurry incident to all Agricultural Fairs, it is quite possible that some articles upon exhibition were not entered on the books of the Society, and do not therefore appear in the foregoing list. It is, however, believed that the list is as near perfect as it is now possible to make it; and that it presents the most complete account yet given of the extent, variety and attraction of the late Fair.

"SNEEZE WEED"—CATTLE POISONED.

TO THE READERS OF THE SOUTHERN CULTIVATOR:

Having been informed of several well authenticated cases of disease in stock, generated by eating of the plant commonly known as "Sneeze weed," by botanists called *Halenium autumnale*, I have thought the interests of agriculture and the cause of humanity might be advanced by drawing the attention of the observant to the fact. Have the readers of the *Cultivator* any information on the subject? If so, will they please let us have it? And if not, will they look out for it? From all I can learn the disease resembles, or perhaps is, the blind staggers. The cases reported to me have proved fatal to cows, horses and mules. Perhaps some of the cases of mysterious mortality, frequently occurring among stock, might be traced to the subtle poison of this plant. It will strike every one as worthy of investigation.

GARNETT ANDREWS.

Washington, Ga., 1854.

ANTIDOTE FOR STRYCHNINE.—Camphor has been discovered to be an antidote for that terrible poison, strychnine. A man who had been thrown into convulsions by two doses of poison—one-sixth of a grain each, administered for the rheumatism—was relieved by 20 grains of camphor taken in six grains of almond mixture. Dr. Sud-dock, in a letter to the London *Lancet* claims to have made the discovery.

Horticultural Department.

WORK FOR THE MONTH.

[FEBRUARY (Latin, *Februarius*) received its name from *Februaria*, a feast of sacrifices and purifications held by the Romans in this month, by which the people were supposed to be cleansed from the sins of the whole year. It corresponds to ADAR, (Ezra vi. 15,) the sixth civil and twelfth sacred month of the Jews. By the Saxons, it was called Sol-monath, i. e. the *Sun-month*, from the evident increase in the length of the days.]

THE PLANTATION.

Go on vigorously with your plowing for *Corn* and *Cotton*. Sow Spring *Oats* and plant *Irish Potatoes*.—Prepare your ground well for *Corn*—plow deep, manure heavily, and plant the letter part of this month, or early in March. Haul out and distribute manure over your fields—fill up all old galls or gullies—plow your hill-sides horizontally, and as deep as possible, to prevent washing. Begin to prepare for *Cotton* planting.

Do not fail to put in a full crop of *Corn*, on your best lands, even if you raise a little less cotton.

Hedges.—Set out boundary and dividing hedges of the Osage Orange, the Cherokee Rose, the *Crataegus Pyracantha*, or Evergreen Thorn, the Honey Locust, the Spanish Bayonet, or any other plant that has been proved to succeed well in this climate.

THE VEGETABLE GARDEN.

The operations of the Gardener may now be said to commence in good earnest. In order to secure a regular and abundant supply of good vegetables, the garden must be put in thorough condition at once—(see remarks under this head last month.)

Cabbage and *Lettuce* may now be transplanted safely, provided some means are adopted to protect them from the frost. Sow *Peas*, *Radishes*, *Cabbage*, *Beets*, *Carrots*, *Lettuce*, *Salsafy*, *Spinave*, *Parsley*, *Parsnips*, *Pot Herbs*, &c., &c. Plant a full crop of *Irish Potatoes*, early *Corn*, &c. Prepare *Hot Beds* for the propagation of *Tomatoes*, *Pepper*, *Egg Plants*, &c.. Dress *Asparagus* beds, using salt liberally on the surface.

THE ORCHARD AND FRUIT GARDEN.

Set out the *Peach*, the *Plum*, the *Apple*, the *Pear*, the *Quince*, the *Fig*, the *Pomegranate*, the *Grape*, the *Strawberry*, the *Raspberry*, and all other desirable kinds of fruit and ornamental trees and shrubs. Examine *Peach* trees for the worm and *Apple* trees for the borer, and dig those depredators from their hiding places with the sharp end of your knife. Heap leached ashes around your *Peach* trees from the "collar" to the height of 3 or 4 inches above the surface of the ground. Work around your fruit trees, stirring the ground well as far as the branches extend, and applying a good top dressing of manure. Cover the surface with leaves, pine straw or loose manure, to the depth of four or five inches, so that the roots may be protected from drouth, and nourishment imparted to them during the growing season.

Graft choice varieties of the *Plum* upon wild *Chickasaw* stock; "whip-graft" the *Peach*, the *Apricot* and the *Nectarine* upon the same, inserting the scion near the ground. The *Peach* may also be successfully cleft-grafted on its own root, by digging it up and cutting in the tap root freely. Use as ligatures, strips of cloth, dipped in grafting wax, and in planting, place the insertion of the graft an inch or two below the surface.

Cuttings.—Many plants and fruit trees grow readily from cuttings, and this is by far the simplest and easiest method of propagation. Among fruit trees peculiarly

adapted to this climate, which strike freely from cuttings, the *Fig*, the *Quince* and the *Pomegranate* are deserving of especial attention. Now is the time to put them into the ground, and the following method will in most cases succeed, perfectly: Take your cuttings off just between the young wood of 1854 and the old wood of 1853, or if you use young side shoots, preserve the collar of the shoot when you cut them off close to the branch. Let your cuttings be from 12 to 18 inches long, and at least half an inch in diameter—plant in 3 feet rows, 1 foot apart, in rich moist soil, leaving but one or two buds above the surface—or bend your cutting in the form of a half circle, and insert both ends deeply, leaving only one bud in the middle exposed—press the earth firmly around all parts of the cuttings, and as warm weather approaches, mulch around them heavily with straw, dead leaves, or other litter. As soon as the new buds begin to start on your cuttings, rub off all but the strongest, which must be reserved to form the future tree, and let this bud or shoot remain during the first year without pruning.

THE FLOWER GARDEN.

Plant, at once, all *Bulbs*, such as *Hyacinths*, *Tulips*, *Crown Imperials*, *Dahlias*, &c., &c. Sow tender *Annals* in hot beds, and prick out into ground as soon as all danger of frost is over. Dress and trim borders; plant edgings of *Box*; spread gravel on garden walks, and roll the surface firmly; plant ornamental *Hedges* or screens of *Arbor Vitæ*, *Wild Olive*, *Holly*, *Privet*, &c. Prune *Roses* and other ornamental shrubs. Set out rooted plants and cuttings of the *Rose*, *Cape Jessamine* and other flowering plants. Stake all newly planted and plant shrubs. Clear up all weeds and foul trash, and prepare your flowers to "see company." Prepare ground for lawns, by plowing very deep (subsoiling 18 inches), manure highly and sow a liberal allowance of mixed seed, such as *Kentucky Blue Grass*, *White Clover*, *Herd's Grass*, *Texas Musquit*, *Italian Ray*, &c., &c. When sown, roll smoothly with a heavy cast iron or stone roller, and keep off all fowls, pigs, cattle, &c.

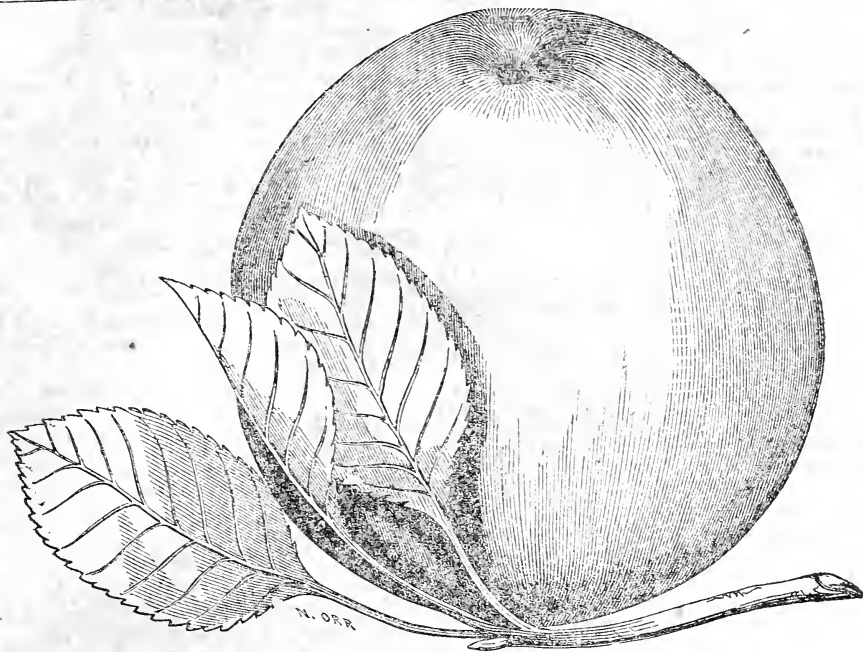
Transplant *Evergreens*, by digging a deep trench around them, (if large trees,) and lifting a large ball of earth with the roots. Prepare a wide and deep hole to receive them—cut off smoothly with a sharp knife, all broken or bruised roots; use an abundance of water; fill in with fine, rich soil, pressed firmly around the roots with the foot; leave a shallow basin or cavity around the trunk to hold water hereafter, and finish by staking securely and mulching with a thick layer of leaves or straw, over which sprinkle a few shovelful of earth, to keep the wind from blowing it away.

PRESERVING SWEET POTATOES.

MESSRS. EDITORS—A convenient mode of preserving small quantities of *Sweet Potatoes* for family use is to pack them in hogsheads or boxes with dry leaves, straw or pine trash. They keep better if dug before the vines are killed by frost. Those which are injured in digging by being bruised or cut should be used up first, as they will not keep. Let the others dry a week in small piles under cover, then put a layer of leaves at the bottom of your box, then a layer of potatoes, and so on, alternately, until your box is full, closing with a good coat of leaves. Keep the boxes in a dry place and free from frost. In this manner they keep perfectly well and are always accessible when wanted.

WM. N. WHITE.

Athens, Ga., Jan., 1855.



SOUTHERN SEEDLING APPLES— No. 6.

THE "QUEEN."

THERE are two distinct apples known by this name. This apple is much superior to the other, which is a summer apple—whilst the above is a winter fruit, and of first rate quality, and one of the most beautiful. It evidently belongs to the class of *Pippins*, and the Committee take pleasure in recommending it to the favor of the public, as worthy of general cultivation. [The *Summer Queen* is more conical in its form, and inferior to the above:] a beautiful and symmetrical ovate; calyx slightly sunk; stem three-quarters of an inch long; color, a fine golden yellow. Probably a good keeper. Size, medium to large. Exhibited by Z. R. Jones, Esq., of DeKalb county, Ga., and said to have been introduced from Western Virginia.

J. VAN BUREN.

Clarksville, Ga.

SOUTHERN VS. NORTHERN FRUIT—LETTER FROM MR. VAN BUREN.

MESSESS. EDITORS:—In an article over the signature of "C. D.," in your January number, an opinion is expressed, that the senior editor and ourselves are "both right and both wrong, in some points," relative to the merits of Southern and Northern fruits.

We wish we could say the same of him. As to the quantity per acre that can be raised at the South, time alone can determine; as most of our orchards are at this time too young to afford such a yield as would give a reliable indication of what it will be when the trees arrive at more mature age.

He says, "New York State, as a whole, can beat Georgia for apples, in quantity, (per acre,) in quality, and long-keeping." And as an evidence of the latter assertion being a fact, says that "those raised in the Northern portion of the State keep longer than those raised in the Southern portion." Why? We say, because they probably originated in the Northern region, or the trees were raised there. This is our doctrine precisely. Were they removed still farther South, they would keep a shorter time than they now do, showing entire unfitness for Southern cultivation.

Again: He says he can easily believe "that peaches and melons are much better here than in New York, because they require the hot sun to sweeten them; and it is possible that early Southern apples may be; but cannot think winter apples are, because, with us the sun is too hot, and they ripen rather prematurely."

Mirabile dictu! How do you know the sun is too hot, and that they ripen prematurely? You have hotter days in New York than we do in Georgia, but not as many of them. Yet you appear to have a suspicion that our early apples may be as good, or perhaps better than yours. Don't they ripen in our hottest months, say June, July, and August? There is no doubt but they are better, and from the fact of getting more heat and sunshine than yours.

How stands the question about late ripening varieties? Your Newtown Pippin, Spitzenberg, Baldwin, &c., ripen from the middle of September to the middle of October, when the frost usually cuts down vegetation. Our Nickajack, Cullasaga, Berry, Buff, Limbertwig, and Wall, with a dozen or more others, ripen—when? From the middle of October to the last of November!

This is doubtless a startling fact you had never before heard of. When the valley of the Mohawk and Hudson are wrapped in snow a foot deep, apples are just ripening in Georgia. It is an indisputable fact—apples will grow in Georgia, and good ones too; and that in spite of Northern opinions.

"C. D." further says, if they could grow here as they do in New York, until frost begins to appear, they might equal theirs. For Mr. D.'s especial information, we will now say, they always do. And for further information, will say, that all the winter varieties that have originated to the South of us ripen at a still later period.

There is another fact connected with fruit culture at the South, which has never been brought to public notice, that I am aware of, which is, many varieties have a propensity to produce two crops in a season. The Carolina

or Red June almost uniformly bears a second crop, and not unfrequently of fair and medium size. The same with English Jargonelle and Belle Lucrative pears, together with some of the cherries. Whilst Mr. PEABODY has succeeded in producing a continuous crop of strawberries, may we not reasonably expect from existing facts, that even apples, pears, and other fruits will be found ripening in the region of New Orleans as late as January? Dr. BALDWIN, of Montgomery, Ala., has succeeded in raising a peach, which ripens as late as the first of November, and which we are informed can be kept until Christmas. This is a fact which those to the South of us should bear in mind, and at once begin raising seedlings of apples, pears, cherries, and other fruits.

A short time since, we had presented to us by a friend in Athens, Ga., some apples fresh from the county of Delaware, New York State. Amongst them were our old and particular favorites, the Spitzenberg, Rhode Island Greening, Vandevere and others; these we have compared side by side, and taste by taste, with our Nickajack and Cullasaga, and in all points, even to size, have written them down, wanting. What effect the climate and soil of New York may have on our Southern seedling varieties, we will not attempt to predict; neither does "C. D." know. Our winter varieties probably would not ripen there any more than would our corn. Their season of warm weather is too short. "C. D." thinks the world cannot produce such apples as their Newtown Pippin. We too once thought so, but have found out there are such places in the world as the Carolinas and Georgia, and that there are such apples as Julien, Cullasaga, and others, equal in flavor, superior in size, and that will keep as well as the Newtown Pippin, or any other.

"C. D." can hardly be competent to judge of the relative merits of Northern and Southern apples. From his own showing, he knows little about the latter. We will run the risk of saying he never saw or tasted one of the kinds we have mentioned, nor probably any other seedling variety originated at the South.

We speak advisedly, although we may err in taste and judgment, as to their relative qualities. We have spent thirty-six years of our life in New York, and fifteen years in Georgia; and have had ample opportunity to compare both Northern and Southern varieties together, and now again reiterate what we have before said—we can beat your best varieties; you to grow yours in New York, we ours in Georgia; you to select your favorite varieties, and we to be allowed the same privilege. For the last five or six years, we have maintained that we could not grow your Northern varieties successfully here, nor shall we make an attempt to enter into competition in such a futile project.

There now appears to be an attempt to create an impression (by Northerners, or more particularly by some living at the North,) that our climate is adverse to the production of fine fruit. Why is this so? If they can make our people believe our climate is prejudicial to it, the enterprise of growing fruit here would then be at an end, because the defect would be incurable, and we still, as heretofore, dependent on them for our supply. Now here we would take occasion to say, *climate* has very little to do either with your success or failures. That our soil is generally poorer than that of New York, we are willing to allow; but that is a curable defect, and one we are pleased to see is daily becoming more and more appreciated.

The most material and palpable effect we can anticipate our climate to produce in contradistinction to a colder one, in the cultivation of fruit, is, that ours will be more aromatic and saccharine than those of a higher latitude. It can hardly be otherwise, reasoning from analogy, that the land of Oranges, Lemons, Pine Apples and Spices,

should produce fruit superior rather than inferior to that of Pumpkins and Irish Potatoes.

Before we make our adieu, we will take occasion to say to the senior editor of the *Southern Cultivator*, that on taking a retrospective examination of our article in the August number of that paper, we are unable to discover the intimation of so great a chemical heresy, as to identify the aromatic property or principle with that of the saccharine. Forty years ago we might possibly have done so; but not since our Sophomore days.

J. VAN BUREN.

Clarksville, Ga., January, 1855.

NOTE.—Since writing the foregoing article, I have received a letter from that ardent, enterprising, and successful pomologist, Dr. W. O. BALDWIN, of Montgomery, Ala., giving the history of three seedling apples, which were doubtless produced by the Creek Indians near that place. One of these is nameless, or rather known by the name of every man who has last cultivated it; the others are known as the Red Warrior and the Carter apple. The latter, Dr. BALDWIN informs us, ripens and hangs upon the tree until January; thus verifying our prediction before the ink had dried, which was, that varieties of apples would be produced to the south of us, ripening as late as the month of January. Although fruit cannot be kept, after it is gathered, as long with us as in New York, from the fact of our climate being warmer, and hastening fermentation more rapidly than theirs, yet we can have apples more months in the year than in New York, taking into account the time of our earliest ripening varieties, up to that of our latest ripening varieties. And, moreover, our apples have no greater disposition to decay here than those imported from New York.

J. V. B.

FRUIT CULTURE IN THE SOUTH.

No. 3.

[Concluded from our last.]

MR. EDITOR—In planting an orchard of fruit trees, the importance of deepening the soil by trench plowing is so obvious, that no one should think of planting without this preliminary step. Not less important, in event the land has been long cropped, is to restore to the soil the mineral manures so essential to success in fruit growing, viz: the potash, phosphates and lime, which may have been taken up in the cultivation of corn and cotton. Chemical analysis has shown that phosphorus and potash, and lime, enter largely into the ash of those last named plants; and these being the mineral substances essential to the healthy growth of the peach, the pear, and the apple, it follows, or may be inferred, that any soil which will grow cotton or corn in luxuriance, will be well adapted to the growth of fruit trees. If the soil then is not naturally a rich one, it should be made so by the compost heap. This compost should have for its basis, muck or black mould, into which stable manure, and ashes, and dissolved or broken bones, and charcoal, should enter largely; all to be thoroughly intermixed and decomposed before putting it in the soil. My plan in preparing for an orchard has been, first, to select land that has been mellowed by root crops—next, to enclose it with so substantial a fence as effectually to exclude all domestic animals—next, to spread the compost two inches in depth over the surface of the land—next, to deepen the soil by trench plowing, (running the plow twice in the same furrows)—followed by the sub-soil plow—next, to plant only home grown trees, or those from nurseries in the South, and until the trees grow large enough to shade their own roots, to keep them well mulched with straw or leaves; and lastly, to keep the orchard in cultivation, (root crops are best,) and annually enriched

with suitable manures; for a plant can no more grow and bear healthy fruit without its appropriate food, than an ox or a horse can be expected to thrive without a sufficiency of corn and fodder. I deem it unnecessary to enter into minutia on this point, as the valuable almanac of Mr. Affleck (accessible to all) contains such explicit and practical directions in all that regards fruit growing, that anything I could say would be superfluous.

I will pass by the smaller fruits, the strawberry and the raspberry, so easily and successfully cultivated in the South, and take up the *Pear*.

This fruit I have grown in perfection for many years—even Northern and European varieties with me have borne large fruit, and higher flavor, than in their native localities. This fruit should never be allowed to ripen upon the tree. The flavor is greatly improved by taking off the specimens when hard on the tree, and ripening them in the fruit room. I use for this purpose an inside cellar—dark, but well ventilated, and having double walls. The fruit should be suspended by strings from the joists, and not placed upon shelves. In case of dampness, a few lumps of lime placed upon the floor will absorb it.

Another difficulty: The largest and heaviest pears are apt to drop from the tree, especially during a period of drouth. This I have obviated, by placing barrels filled with soap suds over the roots of the tree, and allowing the liquid to escape by drops from a small orifice near the bottom of the barrel. The soap suds and a handful of Guano thrown in, will increase the size of the fruit, and keep the tree in good health during our hottest months. In regard to gathering the fruit, I would observe that this is best learned by experiment. If taken off too early, the specimens will shrink and wither; if too late, they are more apt to rot, from the fact that as the fruit approaches maturity it is more liable to be stung by insects, and all such specimens will rot before they ripen. As a general rule, it will answer to ascertain the date of ripening of the different varieties at the North, and in this latitude gather them six weeks to two months earlier.

PEARS—EARLY VARIETIES.

Madeleine.—This pear is of French origin—bears well with me, on both quince and standard—is the earliest pear to ripen in Europe and the North—ripens here on the 15th May in the cellar, and is in eating a week—not a specimen has rotted—flesh juicy and melting—quality very good.

Doyenne d'Ete.—With me a higher flavored pear than the *Madeleine*—should be gathered so soon as specimens begin to turn from green to yellow, and be ripened in the house—ripe last of May. This pear is of French origin and recently introduced.

Bloodgood.—One of the best of early pears—a slow grower on quince—should be double worked—ripens here early in June, and quality best.

Rostiezer.—An early pear of German origin—on quince a rapid grower, and bears heavily—though small in size, no early pear surpasses it in flavor—ripens with me in the cellar on the first of June.

Beurre Giffard.—One of the new European pears introduced by Mr. Affleck—from the few specimens I had this year from grafts in standard, it gives promise of the highest excellence—ripens in June, about the 10th.

Tyson.—A new Pennsylvania pear of great merit—ripens with me in the latter part of June.

Griffith's Seedling.—A native pear which originated in the grounds of the late John T. Griffith—though small in size, it fully equals the flavor of any of the early exotic sorts—ripe first week in June.

I have ripened a number of other early varieties described in the works on pomology, but deem the foregoing the most desirable for this region of our State.

PEARS—SUMMER VARIETIES.

Julienne.—This pear I think a most desirable variety, either for the orchardist or for general cultivation—grows and bears better on quince than on standard—comes early into bearing—my dwarfs, now eight years old, have borne fruit several years past—had this year to trim out, leaving about 300 specimens on each tree—will ripen in the house a month before they are ripe upon the tree—in eating during all July and early part of August—changes in the fruit cellar from green to a beautiful lemon yellow—skin waxy, shining, and looking as if varnished—flesh melting, buttery, and delicately flavored. As the *Julienne* has been condemned by the congress of fruit-growers at the North as unworthy of cultivation, I requested a number of gentlemen in this county, who are good judges of fruit, to give me their opinions as to its merits—all pronounced it a pear of the highest excellence here, and some few as the best pear they had ever eaten, North or South.

Bartlett.—Grows well on either quince or standard—a profitable pear to the orchardist in the South—has the desirable quality of ripening in the cellar long before maturity upon the tree—in this locality is in eating from the middle of July to the 20th of August—in quality ranks best.

Beurre Diel.—Succeeds here on either quince or standard—an abundant bearer—had to thin out my dwarfs to 150 specimens to a tree—the fruit attains a much larger size here than at the North, some of my specimens weighing one and a half pounds, and few less than one pound—ripens finely in the cellar, changing from green to a rich orange color—flesh rich, sugary and melting—quality best—ripe in July and August.

Duchesse d'Angouleme.—This noble pear, of French origin, in our rich, warm soil and burning climate, attains its highest perfection—grows finely on quince, and comes early into bearing. Its large size, excellent flavor and fine keeping qualities, will make it most desirable for market culture—flesh buttery, very juicy, with a rich, agreeable flavor—ripe from the middle of July to the 15th September. I have taken this pear from trees toward the end of July, together with *Beurre Diels*, *Barletts*, *Beurre Bilboas* and others, and carried them by steam from Natchez to New York, where they opened sound, and most of them ripe on the 14th of August. Although not esteemed as a desert pear at the North, with us there are few better or more desirable pears for general cultivation. As you have tasted this fruit, Mr. Editor, be so good as to give your opinion of its quality.

[A finer, richer, more luscious pear we have never eaten than those of the above variety from the luxurious orchard of our friend, the writer of the above. They grow to great size, are delightfully flavored and possess the rare quality of perfectly dissolving in the mouth. A better pear for table could hardly be cultivated.—*Ed. Natchez Courier*.

No. 4.

Golden Beurre of Bilboa.—This pear does well upon both quince and standard—my standard tree has borne heavy crops for ten years past—fruit large, buttery, melting, and having a rich vinous flavor—in eating last of July and early in August.

Beurre d'Amalis.—On standard—fruit very large—not unlike the *Beurre Diel* in size and shape—flesh melting and buttery, but inferior in flavor to the *Diel*, having sometimes a slight astringency—in eating during August, and ripens finely in the cellar.

Beurre Bosc.—Double worked on quince—this pear is one that does not grow freely upon quince—by first grafting on the quince a free growing sort, as the *Julienne* or *D'Angouleme*, and then grafting the wood of the latter with the *Bosc*, it grows rapidly—it is a tardy bearer on

standard, and not a heavy bearer on quince, but is a most delicious pear—ripe here in August.

Doyenne White.—Some 30 to 40 years ago, this was the most popular pear grown east of the Alleghany Mountains: well known as the Butter Pear in Pennsylvania, and the Virgalieu in New York. Of late years, upon the Atlantic sea-board, it has cracked so badly, and the fruit is so indifferent, as to cause it to be rejected, as unworthy of cultivation, and regarded as a variety that had "run out." This theory, that there is a limit to the healthy duration of all varieties of fruit, (and even other plants, as the potato, the cotton plant, &c.) after which they become so mortally diseased as to be unworthy of culture, has found many advocates. Unfortunately for these theorists, the White Doyenne, in the virgin soils of the West, has regained all its pristine health and beauty and excellence. In this locality, it bears most abundantly on either quince or standard, and the fruit is without a defect; inferior, however, with me to its cousin germain the Julienne. Ripe in August and first part of September.

Beurre Garbault.—This is one of the new varieties so extolled in Europe—introduced here by Mr. Affleck. With me, upon the quince, it surpasses even the Seckel in delicacy of flavor—every specimen of the fruit perfect, and not one rotted—may be ripened in the cellar from the middle to the latter part of July—fruit medium sized, and retains its green color when ripe. I think this pear a great acquisition.

Fondante d'Automne.—Bears well on both quince and standard here, and no pear surpasses it in its season for high aromatic flavor—ripens in the latter part of August and to the middle of September.

Vert Longue.—Upon standard, a desirable fruit, as it bears heavy crops, and not a specimen rots—very long, pyriform in shape, and retains its blueish green color when ripe, which occurs here the latter part of July.

Seckel.—I have tested this fruit both on quince and standard, and although it sustains its high reputation for flavor, it has the defect of rotting considerably. With me, the *Old*, a seedling from the Seckel, is a more desirable fruit—ripens in August.

There are a number more of summer varieties I have ripened, worthy the amateur's attention in this climate, such as the *Louise Bonne de Jersey*, *Von Mons Leon le Clerc*, *Flemish Beauty*, *Leech*, *Kingsessing*, *Doyenne Dix*, *Brandyvine*, *Marie Louise*; and among new sorts of European origin, the *Beurre d'Anjou*, *Doyenne Garbault*, *Vicomte de Spoelberch* and *Triumph de Jodoigne*. For varieties ripening in the fall, I can recommend *Winter Nelis*, *Chauvontel*, *Passe Colmar* and *St. Germain*.

A selection of a few of the foregoing kinds will keep a large family abundantly supplied with this delicious fruit from the middle of May to the end of November. Why the pear has been so generally neglected in the South, I cannot imagine; as regards climate, we are much more highly favored than the Northern or even the Middle States, as we never experience such intensity of cold as sometimes destroys entire orchards at the North. All that deciduous fruit trees require, is a winter just cold enough to give the trees a period of rest to recruit for another summer's fruit-bearing; and next, a period of heat long enough to mature the fruit; and all this we have in perfection. As regards soil, no land is richer in phosphates than the virgin mould of the upland river counties of this State, while the great underlaying loamy formation of the same region (filled in most localities with decomposed shells and the bones of extinct orders of the mammalia) is no less rich in the carbonate of lime.

In regard to the blight, I have never lost any grown-up trees, but the limbs and vigorous grafts are sometimes blighted. This blight is caused (as I think, with Mr. Ernst, of Cincinnati,) by the powerful rays of a burning

sun followed by sudden showers of rain in summer. It has been a striking coincidence that the very time this blight has happened to limbs of trees, that animals and negroes have been struck down with *coup de soleil* in the fields. The frozen sap blight so destructive at the North as to deter orchardists there from planting the pear extensively, I have never seen in this region of the South. As a preventive of sun blight, it is all important with us that the trees should branch out low down, so as effectually to shade the trunk and the roots.

Before closing with the pear, I would remark that root pruning, with the view of inducing early bearing, should not be practised in this climate. I admit it will cause the tree to set fruit buds in profusion, but not a fruit will hold on, and the tree be retarded two years at least in bearing again. I also desire to call the attention of amateurs to the importance of originating new varieties adapted to our climate, from the seed. The system so long pursued by Van Mons, of sowing the seeds of hardy kinds, and continuing to sow until by the third or fourth generation he procured fine fruit, has now been supplanted by the speedier method of cross-breeding. By grafting one-half of a standard tree with a large sized pear, as the D'Angouleme and the other half with a smaller pear, but of higher flavor, as the Beurre Garbault, fruit from the seed of these pears (the pollen having intermixed) would be found to have the desirable qualities of both parents. In this way, too, the South may procure pears which will keep during winter, as already a variety has originated in Georgia which is said to keep through winter until April.

APPLES.

This fruit has been grown generally with more success in the South than the pear. The early and summer varieties do better than the kinds known as winter apples at the North, for the reason that these last are more apt to rot or fall from the tree before maturity. The early sorts ripening here in June or early in July are, *Early Harvest*, *Red Astrachan*, *Benoni*, *Early Strawberry*, *Drap d'Or*, *Summer Rose*, *Early Chandler*, *Red Margaret*, and *Red June*. The Early Harvest is the highest flavored of all with me but a rather shy bearer.

Among summer varieties, ripening here in July and August, I can recommend, *Bullock's Pippin*, *Cooper Apple*, *Fall Pippin*, *Maiden's Blush*, *Rambo*, *Gravenstein*, and *Yellow Newtown Pippin*. These are all valuable sorts; but out of a large number I have ripened in this latitude, I find no apple to compare, either in size or flavor, with an apple of the pippin family which was introduced into this county by the early Spanish colonies. It is the national apple of Spain, where it has been cultivated from the highest antiquity and known there as the *Camuesar*. This variety has become thoroughly acclimated, and bears in my grounds abundant crops of healthy fruit every year; fruit very large, some specimens of monstrous size—roundish-oblong in shape—skin smooth, oily to the touch, yellowish green to clear pale yellow, with sometimes a blush of brownish red next the sun; flesh yellowish, crisp, tender, and with a sugary and highly aromatic juice. Mr. Affleck has propagated this variety under the name of "*Elgin Pippin*." A skillful orchardist in the South, by planting 100 or more acres with this fruit for the supply of Southern and Western markets, would make a most capital investment. It bears transportation well, as I have sent it to New York in August with complete success. Is in eating, if ripened in the house, the last of July and all of August.

I think it highly probable that Southern Seedling Apples will soon displace all foreign sorts in the South. Among the new varieties which have originated in Georgia, the *Shockley*, *Bacolinus*, *Buff*, *King*, *Callasaga*, *Wonder*, *Thurmond*, *Berry*, *Summerour* and *Neverfail* apples, a *very* highly recommended. As my trees of these varieties have not yet fruited, I cannot speak of their

merits, but Northern Pomologists have ranked several of them in the highest class.

THE PEACH.

This fruit is so easily grown with success in our climate that I will not dwell upon its culture. The Northern varieties do well, and ripen in June, July, and August; for later kinds Southern seedlings must be, and many excellent ones already have been originated. I have known several sorts of this fruit to reproduce themselves from seed, and your venerable fellow-citizen, Mr. Carson, informs me he has had many varieties to reproduce from seed fruit of the highest excellence, and that he found no difficulty in succeeding, provided the peaches for seed were left upon the trees until, in common parlance, they were dead ripe.

THE APRICOT.

Since planting my trees upon the north side of buildings, the Apricot has in some years borne heavy crops of delicious fruit. Blooming as it does about the time we have sharp frosts, it requires close watching to prevent its loss. Smoke from a pile of cotton seed, or rotten logs, placed under trees when a frost threatens, will protect the blooms and secure the crop. This fruit ripens here in May or the early part of June.

THE CHERRY.

Upon the Mahaleb stock, I have trees six years from the bud, which last year bore large crops. The fruit in size and flavor equalled any ever grown at the North. As this fruit is cultivated in perfection at the present day in both Italy and Spain, I see no reason why it should not do equally well in our climate. We may originate new varieties from seed, if Northern sorts do not readily become acclimated.

INSECTS INJURIOUS TO FRUITS AND FRUIT TREES.

In a country where there are few if any old orchards, insects injurious to trees are not likely to abound. The apple-borer and canker worm are seldom met with; the peach-borer (*Ageria exidiosa*) is abundant, but its depredations are easily checked. We have however an insect which I have reason to believe is destructive to our fruits. This is a small brown beetle, known as the *carposagus*, or fruit-eater. This insect is not so large, neither is its puncture at all like that of the curculio. They are especially destructive to the peach and the nectarine, boring into the fruit as it approaches maturity, and thus causing it to rot. They also attack the pear and the apple, if these fruits are allowed to remain upon the tree until they become soft. My attention was called to this insect only a few years ago, when the peach first began to rot with me, and it seems every year to become more numerous and destructive. I think it likely that this is the insect which causes the rot in the cotton pod, of late years so prevalent. I neither know, nor have I heard of any successful plan for their extirpation. I have checked their ravages in some degree in my orchard of peaches, by burning small torches at night, when many fly into light and are thus destroyed. I find, too, they avoid the poultry yard, where the peach in a great measure escapes their attack.

In conclusion, allow me to hope, Mr. Editor, as there must be many zealous horticulturists within the bounds of our State, that they will ere long organize a State Association for the furtherance of horticulture; and if a Congress of fruit-growers, embracing the entire planting States, were annually or biennially to meet at some central point, it would tend to throw a flood of light upon a subject as yet in its infancy among us, but which I feel sure is destined ere many years to add largely to the wealth and resources of the South.

RUSTICS.

THE PRESERVATION OF FRUIT.

From the address of Hon. M. P. WILDER, at the late

meeting of the American Pomological Society, we take the following remarks:

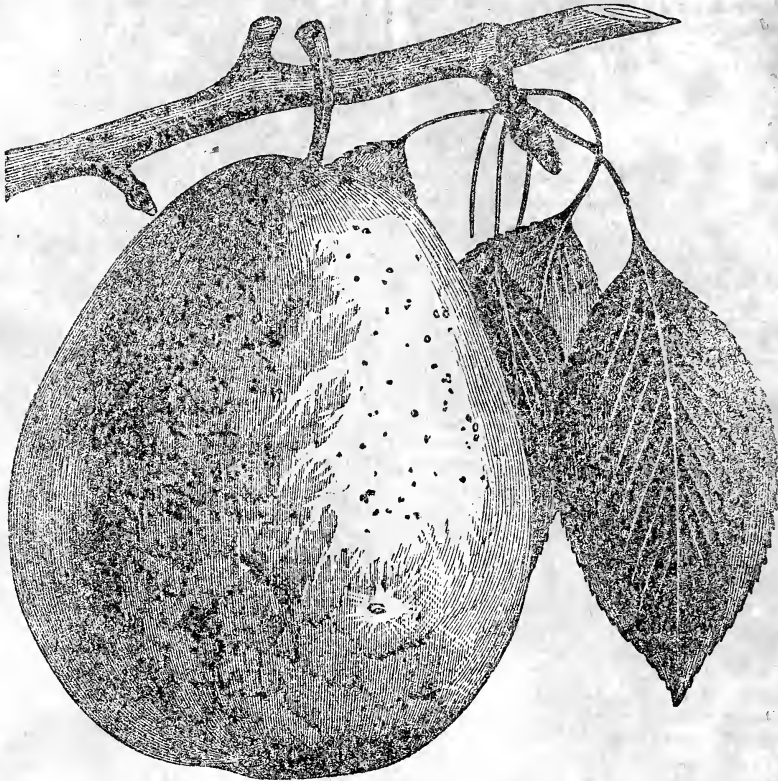
There is but one other topic to which I will advert—the *preservation and ripening of fruit.*

Much progress has been made in this art within a few years, and important results have been attained. This principle has been settled that the ripening process can be controlled. Autumnal fruits have been kept and exhibited the succeeding spring. We have seen the Seckel, Bartlett, and Louise bonne de Jersey pears, in perfection in January, and even later. The maturity of fruits depends on saccharine fermentation. This is followed by other fermentations, as the vinous and acetous. To prevent these, and preserve fruit in all its beauty, freshness and flavor, the temperature must be uniform and kept below the degree at which the fermentation or the ripening process commences. Our remarks, like our experience, have special regard to the apple and the pear, though the principle is doubtless susceptible of a more extensive application. Fruits, designed to be kept for a considerable time, should be gathered with great care some days before the ripening process commences, especially summer pears. A summer pear ripened on the tree is generally inferior. In respect to the latter, Mr. Barry, Editor of the *Horticulturist*, has so aptly expressed my own sentiments, that I use his language. "The process of ripening on the tree, which is the natural one, seems to act upon the fruit for the benefit of the seed, as it tends to the formation of woody fibre and farina. When the fruit is removed from the tree, at the very commencement of ripening, and placed in a still atmosphere, the natural process seems to be counteracted, and sugar and juice are elaborated instead of fibre and farina. Thus, pears which become mealy and rot at the core when left on the tree to ripen, become juicy, melting, and delicious when ripened in the house." Various fruit houses have been built both in this country and in Europe; and experience shows that their object can be attained only by a perfect control of the temperature, moisture and light. Hence, they must be cool, with non-conducting walls, or with exterior and interior walls, or a room within a room. Thus the external atmosphere, which either starts the saccharine fermentation or conveys the agents which produce it, can be admitted or excluded at pleasure. It is possible, however, to preserve the temperature at so low a degree and for so long a time as to destroy, especially with some varieties of the pear, the vitality, and therefore all power ever to resume the ripening process. Experience proves that for the common varieties of the apple and pear, about forty degrees of Fahrenheit is the temperature best suited to hold this process in equilibrium.

The proper maturity of fruit thus preserved demands skill and science. Different varieties requires different degrees of moisture and heat, according to the firmness of the skin, the texture of the flesh, and the natural activity of the juices. Thus, some varieties of the pear will ripen at a low temperature and in a comparatively dry atmosphere; while others, as the Easter Beurre, are improved by a warm and humid air.

Some varieties of the pear ripening with difficulty, and formerly esteemed only second rate, are now pronounced of excellent quality, because the art of maturing them is better understood.

But so many experiments have been tried, or are in progress, and so much has been written on this branch of our subject, that I need not enlarge except to say that the art of preserving and ripening fruit in perfection, involves so much scientific knowledge as to require great attention and care; and, until its laws are more fully developed, must be attended with considerable difficulty, I therefore commend it to your special attention, as second in importance only to the raising of new varieties.



THE FLEMISH BEAUTY PEAR.

THE subject of our engraving, is a most excellent variety of the Pear. The fruit is large, the skin a little rough, pale yellow with marblings and patches of light russet; the sunny side reddish brown at maturity; flesh yellowish-white; not very fine grain, but juicy, melting, very sweet and rich. Ripens the middle of August. The Flemish Beauty is one of the most superb pears in this climate, sometimes measuring 12 inches in circumference. The tree is very luxuriant, and bears early and abundantly. The fruit should be picked before it parts readily from the tree, and allowed to ripen in the house, when it becomes very fine; but if allowed to remain on the tree until dead ripe it loses its flavor and soon decays.

Domestic Economy and Recipes.

LIME WATER IN MAKING BREAD.

IN bread-making, the vineous fermentation sometimes passes into the acid, thus rendering the bread sour and disagreeable. Liebig has lately performed a series of experiments to improve the preparation of bread, from which he comes to the conclusion, that the only effective and innocuous means of improving the qualities of wheat and rye bread, is lime water. In making dough he advises one pint of clear lime water to be used for every five pounds of flour. The lime water is first added to the flour, after which a sufficient quantity of common water is added to work the whole into good common dough—the leaven being mixed with water can be prepared by stirring some quick lime in a vessel containing pure cold water, then allowing the sediment to settle. The clear is then to be poured off, and kept in bottles for use. No care is required respecting the quantity of lime to be stirred in the water, as it will only take up a certain quantity of lime, and no more. Those who use saleratus (bicarbonate of soda) in the raising of bread, are recommended to cease its use, and employ pure baker's yeast and a little lime-water. Our bones are composed of the phosphate of lime,

and those who use fine flour require for their health a little more lime than is contained in their food. Cream of tartar and carbonate of soda are inferior to common yeast for making healthy bread.—*Scientific American.*

TO STOP BLEEDING OF THE NOSE.—Take as strong a decoction of white oak bark as you can conveniently make, and saturate it well with sugar of lead, and with a swab fastened to a small stick of four or six inches in length, you can carry this liquid fully through from the nostril to the top of the windpipe, and in doing which you are sure of applying some of this liquid to the ruptured blood vessel, and if anything will stop the bleeding, this is sure to.—*Rural New Yorker.*

TO CURE EARACHE.—Earache may be relieved by dropping a little sweet oil and laudnum, warm, into the ear, and applying hot salt in flannel bags, so as to keep the part constantly warm.

WASH FOR THE HAIR.—Olive oil, half an ounce; oil of rosemary, one drachm; strong hartshorn, two drachms; rose-water, half a pint. Add the rose-water by degrees, otherwise it will not amalgamate.

CROCKER & REES,

WAREHOUSE AND COMMISSION MERCHANTS.
Jackson-street below and on the opposite side of Warren's Range. The undersigned would respectfully inform their friends and former patrons that they will remove on the 1st September next to the NEW AND SUBSTANTIAL FIRE-PROOF WAREHOUSE on Jackson-street, below and on the opposite side of Warren's Range.

We will give our personal attention to all business entrusted to our care, as heretofore and hope to merit a continuance of the favor of former patrons. We are prepared to make, at all times, liberal cash advances on Produce in store.

Orders for Bagging, Rope, and Family Supplies will be carefully filled, and at the lowest market price.

Augusta, August, 1854—6t

JOHN R. CROCKER.
JOHN C. REES.

AUGUSTA SEED STORE,

(Nearly opposite the United States and Globe Hotels.)

THE Subscribers has received and will continue to receive throughout the season, his stock of Genuine and Fresh GARDEN SEEDS, crop of 1854. The usual deductions made to Country Merchants.

J. H. SERVICE.

N. B.—Giant Asparagus Roots, White and Red Onion Sets, White and Red Clover, Lucerne, Blue Grass, Timothy, Osage Orange, Oregon Peas, &c., &c. Dec—8t

CHEROKEE!**A VALUABLE LOT OF LAND FOR SALE.**

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this Lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

*For terms, &c., apply to the subscriber, or to Col. J. W. M. BERRIEN, of Rome, Ga., who will take pleasure in pointing out the land.
D. REDMOND,
September—1t Augusta, Ga.

EXTENSIVE COLLECTION OF SELECTED ROSES AND**SOUTHERN RAISED FRUIT TREES.****AUGUSTA NURSERY.**

F. A. MAUGE would respectfully inform the amateurs of rare and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camelia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE.
Nov—1t Augusta, Ga.

NEW AND WONDERFUL MACHINE,**WILLIAM STODDARD, PATENTEE.**

THE SUBSCRIBERS having purchased the right of the STATE OF LOUISIANA in the best Machine ever invented, for the purpose of rifling and shaving SHINGLES, BARREL HEADING, &c., are now prepared to sell the Right of the Parishers, at prices sufficiently low to make it an inducement to purchasers.

The Machine is simple in its construction, and not liable to get out of order, capable of splitting and shaving Two Thousand Shingles per hour, better than made by hand. It is portable and can be worked by water, steam, horse or hand power.

Large inducements are offered to persons wishing to purchase the Right of several Parishes. We will have a Machine in the city of New Orleans in a few weeks.
A. S. & A. D. HULL,
Augusta, Ga., Nov. 1854. 4t

**ATKIN'S SELF RAKER
REAPER AND MOWER.**

THREE seasons use of this ingenious, beautiful and yet simple Machine, furnish convincing proof of practical worth. Three hundred, scattered into 19 different States the past season, mostly in inexperienced hands, and nearly all giving good satisfaction, cutting from 50 to 600 acres, proves it not only strong and servicable, but also simple and easily managed. It saves not only the hard work of raking, but lays the grain in such good order as to save at least another hand in binding.

It is warranted to be a good, durable Self-Raking Reaper, and I have also succeeded in attaching a mowing bar, so that I also warrant it as a Mower.

Price at Chicago, of Reapers \$170; of Mowing Bar, \$30; Discount on the Reaper, \$15, and on the Mowing Bar, \$5, for cash in advance or on delivery. Price of Mower, \$120.

Pamphlets giving all the objections and difficulties, as well as commendations, sent free, on post-paid applications.

Agents, suitably qualified, wanted in all sects on where there are none.
J. S. WRIGHT,
Jan55—5t "Prairie Farmer" Warehouse, Chicago.

ROWE'S UNRIVALED PRIZE CRUSHER has had its patent extended for seven years from the 24th of April, 1854. It is generally acceded that this is the only Crusher worthy of the name. It has never failed to take all the first Honors and Premiums whenever exhibited, or brought in competition. It may be truly said, it has no rival. It is the only mill in the world that crushes to powder and mixes thoroughly, Corn, Cobs and Shucks or Straw; answering the treble purpose of Mill, Crusher and Straw Cutter. It is unrivalled for pulverizing Rock-plaster, Shells, Tan-bark, &c; and will outlast, in wear, ten of any other Crushers. For particulars address JAMES ROWE, Patentee, Bainbridge, Decaturco., Ga.

I will furnish machinery for pulverizing Quartz and superintend the erection for \$1600, and warrant the mill to crush a ton per hour of running time. This does not include the engine belt or pulley on the motive power. Any wanting Portable Fence, strictly practical, address as above.
Jan55—2t

AYRSHIRE HEIFERS FOR SALE

AT \$100 EACH.

HEIFER, "PARAGON," one and a half years old, calved March, 1853; Dam "Princess Mary," grand dam imported "Mary Queen of Scots;" sire, imported bull "Robert Burns." "Princess Mary" gave 18 quarts per day, "Mary Queen of Scots" upwards of 80 quarts.

Heifer, "MARIE YUISE," one and a half years old, calved March, 1853; dam "Maria Teresa," imported "Germantown," grand dam "Mary Queen of Scots" imported from Scotland; sire, imported bull "Robert Burns." "Maria Teresa" gave 20 quarts per day, "Mary Queen of Scots" gave 30 quarts.

Jan55—1t

RICHARD PETERS, Atlanta, Ga.

ACCLIMATED HOVEY'S STRAWBERRY PLANTS.

10,000 OF this noted variety of STRAWBERRY PLANTS—two years old, and warranted to bear well the next spring. Price, \$2 50 per hundred plants. Orders from the country executed with promptness and despatch. Apply to WM. HAINES, September—1t 217 Broad-st., Augusta, Ga.

IMPORTED ARDEN SEED, &c.

THE Subscriber has on hand, a large and full assortment of the best English GARDEN SEED of every variety. Also, White and Red CLOVER; Lucerne, Herds, Blue and Timothy GRASS SEED; White and Red ONION SETTS; OSAGE ORANGE; OREGON PEAS; FARMER'S PLASTER; GUANO, &c., &c. For sale, either at wholesale or retail, by WM. HAINES, Augusta, Ga.

N. B.—Orders from the country will receive prompt attention.
Jan55—3t

OSIER WILLOW.

CUTTINGS of the *Salix Viminalis*, the best Osier Willow cultivated, will be furnished by the subscriber at \$3 per 1000. They can be forwarded during the winter or early spring, to all parts of the Union. Also, OSAGE ORANGE plants at \$5 per 1000.
Jan55—4t* S. P. HUGH, Albany, N. Y.

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(NORTH EAST CORNER OF 7TH AND MARKET, PHILADELPHIA.)

THE subscribers are now prepared to offer the Public, one of the largest and best collection of AGRICULTURAL and HORTICULTURAL IMPLEMENTS and FLOWER, FIELD and GARDEN SEEDS, to be found in the United States. Having taken over seventy premiums for Implements at the Pennsylvania State Agricultural exhibition, at Philadelphia, the present season, they can recommend the superior quality and variety of their Implements and Machines with the greatest confidence, and will furnish to order any thing for the Farmer or Gardener or Fruit-Grower, by wholesale or retail, Garden and Flower SEEDS, tested by the subscriber at \$3 per 1000. They are in boxes for dealers to sell again. Fruit and Ornamental TREES and SHRUBBERY of every description, from their Nurseries at Westchester, near Philadelphia. Native and foreign GRASS SEEDS for sale, as are adapted to our climate. They are, also, agents for SUPER PHOSPHATE OF LIME, GUANO, and other fertilizers; also, for most of the new and improved IMPLEMENTS lately introduced. Illustrated Implements, also Nursery and Seed Catalogues forwarded by mail to all post-paid applications.

PASCHALL, MORRIS & CO.,
Agricultural Warehouse and Seed Store,
Corner of 7th and Market, Philadelphia.
Dec—8t

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DEAN COTTON!

THIS new variety of Cotton in this section, not only makes a very fair yield, but is very superior in point of staple, as is testified by a written report of General Williamson, Judge Harris, and others. Planters who raise large crops of Cotton would do well to plant a large portion of their crop with this Cotton, as it will wait much longer on the picker, without falling out; yet it picks easy, and he bolls are very large. It is peculiarly adapted to thirsty land, as the roots sink deep into the earth. It should be planted one-fourth wider in the rows than other cotton. Price of seed per peck, \$1.50; price of seed per bushel, \$5.

TESTIMONY IN ITS FAVOR.

The Houston Telegraph, (Texas) speaking of this new variety of cotton, says: "All who have cultivated the Dean Cotton, so far as we are apprised, are delighted with their success, and are determined to extend its cultivation. The quality of this cotton so far from deteriorating, has steadily improved, and the demand for it in the market steadily increased."

Extract from a letter from Messrs Dean & Cramer, Commission Merchants at Galveston, Texas:

Galveston, Texas, March 19, 1853.

Mr. D. DICKSON—Dear Sir:—There has been about five hundred bales Dean Cotton sold in Galveston this season. It usually sells for 35 to 40 per cent. more than the common kinds of similar classification. A lot of one hundred bales shipped to Boston sold for 15 cents. We could readily sell the first part of Mr. Geo. Dean's crop for 15 cents; but I sold it for a better price.

DEAN & CRAMER

Covington, Ga., Oct. 3, 1853.

We have examined the growth of the Dean Cotton, introduced in this section by D. Dickson, of Covington. Its yield is about equal to our common Cotton; the bolls are very large, and the staple superior to any Upland Cotton we ever saw.

EDW. J. THOMAS,
M. L. KENNON,

JRO. N. WILLIAMSON,
JOHN HARRIS.

Covington, Ga. Oct. 5, 1853.

I planted, on the 14th day of May last, of the Dean Cotton, on red thirsty land; the stalks are large, and the bolls are numerous and large, and the best Upland staple I ever saw, being more than an inch larger.

[From the Southern Recorder of the 26th December, 1854.]

A lot of fifteen bales Dean Cotton, grown on Per Hurst's place, in New Orleans, on the 11th, by Messrs. MAY, VANKO & CO., at the high price of sixteen cents per pound. It was grown on the plantation of JOHN M. FURRY, Wilcox Co., Alabama.

AGENTS—A few seeds may be had from J. J. FARRER; THOMAS STOVALL & CO.; M. P. STOVALL & L. HOPKINS, Augusta, Ga.; THOMAS TROUT & CO.; CHARLESTON, S. C.; O. MORSE, Forsyth, Ga.; A. M. ALLEN, Columbus, Ga.; J. M. STANFORD & CO., Sparta, Ga.

D. DICKSON.

Covington, Ga., Jan. 18th, 1855.

Feb 55—tf

HIGHLY IMPROVED COTTON!
BOYD'S EXTRA PROLIFIC!

THIS new and valuable variety of Cotton, far exceeds any Cotton we ever had in this section for yield, as is proven by a written report of Gen. Williamson, Capt. Bass, Matthew Whitfield, and other good planters, who have tested the merit of this Cotton the present year. Every Cotton planter living in a short climate should plant this Cotton, as it produces a crop of squares and bolls in near half the time of the ordinary Cotton, checking the growth of the weed and going on to maturity. It should be topped about the 20th of July, and if planted on strong land, the side branches should also be topped. Much is lost by planters for the want of careful selection of highly improved Seeds, not only of Cotton, but Corn, Wheat, &c. Planters wanting Seed had best apply early.

Price of the Seed per bushel—\$5.
Covington, Newton Co., Ga., 1854.

D. DICKSON.

CERTIFICATES.

COVINGTON, Ga., Sept. 26, 1854.—We planted this year "Boyd's Extra Prolific Cotton," introduced by D. DICKSON, of Covington, which has proved far the most productive Cotton we ever planted. It is no humbug, but a very highly improved variety of Cotton which we can recommend to our friends with great confidence.

JOHN FRANKLIN, ALFRED IYESTON, DAVID COOK, HENRY GALTHER, M. C. FULTON, J. SEPH B. FLACK, WM. COX, of Morgan county, THOMAS W. SIMS, THOMAS WYATT of Jasper County, LAWSON B. FANE of Morgan County, THOMAS HAMMONDS of Morgan County, MATTHEW WHITEFIELD of Jasper County, JOHN B. CRIM of Chattahoochee County.

COVINGTON, Ga., Sept. 27, 1854.—We planted this year "Boyd's Extra Prolific Cotton," by the side of our other Cotton, no difference in the land or cultivation; Boyd's will make at least one third more than the other.

JOHN N. WILLIAMSON, JOHN W. HINTON.
COVINGTON, Ga., Sept. 29, 1854.—We planted this year "Boyd's Extra Prolific Cotton" by the side of our other Cotton, no difference in the land or cultivation: Boyd's will double the other in production.

JOHN PASS, REUBEN GODDRUFF.
JOHN S. WEAVER, JOHN RAY of Coweta Co.
HOUSTON Co., Ga., Oct. 16, 1854.—I planted, on this same half-acre the present year, for an experiment, the seed of some half dozen of the best improved varieties of Cotton known in this country, all having the same chance in every respect. I feel confident in saying that "Boyd's Extra Prolific" excelled in production either of the varieties, at least one-third, and some much more than that. It is the most prolific and closely bearing Cotton I have ever cultivated.

J. A. MILLER.

COVINGTON, Ga., Oct. 7, 1854.—At the request of Mr. DICKSON, we examined a patch of "Boyd's Extra Prolific Cotton," planted on the 17th of May, on first and second quality of land, without manure. It is decidedly the heaviest balled Cotton we ever saw to the eye of it, notwithstanding the severe drought we had. We counted six-eight grown bolls on a stalk only twenty-one inches high, and 162 grown bolls on a stalk only three feet high, besides a number of small ones. We know of no other variety of Cotton that would have produced such a crop of bolls in so short a time.

MCKINDREW TUCKER, LEWIS ZACHRY, JOHN E. HENDRICKS, FREDERICK COX of Whitfield County, JAMES THOMAS of Sparta, PERNEDUS REYNOLDS, COLUMBUS D. PACE, BENNETT H. CONTESS of Cass County, JASPER Co., Ga., Jan. 17, 1855.—I planted, last spring, one neck of "Boyd's Extra Prolific Cotton seed," on a half-acre of orange bog on land, without manure, which made over three thousand pounds of Seed Cotton per acre. I had the "Pomegranate" by the side of the "Boyd," on a good land, and as well cultivated, which only made two thousand pounds per acre. The "Boyd" being a very early Cotton, matured nearly every boll.

JASPER Co., Ga., Jan. 17, 1855.—I planted one and three-quarter acres of "Boyd's Extra Prolific Cotton" last spring. I got on two-thirds of a stand, yet it made 1578 pounds ginner Cotton.

BENJAMIN PERSONS.

AGENTS.—A few seed may be obtained from J. J. FARRER THOS. STOVALL & CO., M. P. STOVALL & L. HOPKINS, Augusta, Ga.; J. B. EIGH, Madison, Ga.; C. C. NORTON, Greensboro, Ga.; MORROW & KENDRICK, Monroe, Ga.; J. M. STANFORD & CO., Sparta, Ga.; T. & J. HIGHTOWER, White Plains, Ga.; W. S. & J. C. TURNER, Athens, Ga.; CHARLES H. ALLEN, Abbeville, South Carolina; C. PERSON, Eatonton, Georgia; W. J. ANDERSON, Fort Valley, Georgia; JONES, PHILLIPS & CO., Griffin, Georgia; W. M. ROOT, Marietta, Georgia; A. M. ALLEN, Columbus, Georgia; GRENVILLE & SAMPLES, Chattahoochee, Tenn.; O. MORSE, Forsyth, Ga.; H. FREWSTER, Newnan, Ga.; FLOAN & HAWKINS, Rome, Ga.; C. B. ELBORN, Lauro, Ga.; W. H. COOPER, L. Grauge, Ga.; J. A. & S. FRWIN Cartersville, Ga.; J. F. BROOKS, Chattahoochee, Tenn.; SAMUEL DONALD, Donalds, S. C.; A. M. ALEXANDER, Orwellsville, Ga.; SWANSON & CONNER, Monticello, Ga.; THOMAS TROUT & CO., Charleston, S. C.

Any person enclosing me at Covington, Ga., one dollar, I will send them a 500 Seed, either "Boyd's Extra Prolific," or the "Dean" Cotton, by mail, and pay the postage.

D. DICKSON.

F. McCREERY, R. M. HOOKE,
Charleston, Chattanooga.
FARRER & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market.

Feb 55—C'y

CATAWBA GRAPE VINES.

ROOTED VINES of three years old, raised by Mr. Charles Axt, may be obtained by Addressing D. REDMOND, Augusta, Ga.

Feb 55—tf

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., MARCH, 1855.

NO. 3.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS,

Plantation Economy and Miscellany.

THE COST OF FENCING PLANTATIONS.

THERE is scarcely a planter or farmer in the United States who has not seen and felt the heavy tax to which American agriculture is subjected by reason of that early colonial system of compelling every cultivator to fence his crops, instead of requiring every owner of live stock to keep them out of his neighbor's cultivated fields. We will not say that our forefathers did wrong at a time when the area under tillage was comparatively small, fencing timber abundant, and a wide common range for hogs, neat cattle, and other domestic animals, was very desirable, in a new country. Under such circumstances, they might wisely and properly dispense with the ancient common law principle that a man's premises are not to be invaded by another man, nor by another man's stock, as a *right* belonging to the latter, fence or no fence. A moment's reflection will satisfy any one that to give one man's cattle the privilege to graze upon, and occupy another man's land, is an invasion of the rights of property only to be justified by the clear attainment of a higher public good. In all civilized communities, private interests and personal rights are more or less yielded up, and sacrificed for the better security of such rights and interests as are retained and enjoyed by each member of the community.

Not to consume time on what will appear to most readers as mere truisms, we proceed at once to discuss the question whether in a State or District, where Tillage is the great common interest, it is wise to compel the fencing of all crops against hogs and cattle, for the small advantages that accrue from their licensed range over forests and old fields? That this wide range in almost every county in Georgia, (to the circumstances of which our remarks are intended to apply) is worth something to the owners of stock, is not denied. But is it really worth a tithe of the cost of fences in the best planting regions? That the first cost of a mile of good fence is very considerable; and that it will soon need expensive repairs, is always liable to be consumed by fire, and must at the best be followed by another, and another, if the field be cultivated, and at a continually increasing expense as timber becomes scarce and scarcer, are facts too well known by sad experience. We shall not now enter into any estimate in dollars of the amount of this enormous tax upon Southern agriculture, because fencing materials are much more abundant in some districts than in others, and we have not the data at hand to make a fair average. This journal has many readers who are far better qualified by long residence and large experience, than the writer, to make a trustworthy

estimate; and we hope some one will deem the subject of sufficient importance to tell the public through the medium of the *Southern Cultivator* what is the probable cost of defending the crops in a forty or fifty acre field, which a man owns, from the invasion of hogs and other stock; and what is the probable amount of this tax upon a County and a State. An intelligent, thoughtful gentleman, who has called our attention to this matter, says that all the hogs kept in several counties in middle Georgia, sold at a fair price, would not pay for the fences made and supported mainly to keep them out of growing crops.

Such as have woods in which mast for hogs, or canebroke for larger stock, or other forage abounds, can afford to fence in their woodland, and thus enjoy the exclusive benefit of their property. In the District of Columbia hogs are not free-commoners, but cattle are; and by keeping up hogs, and only fencing against neat cattle, the expense of fencing is reduced about one-half. In time, the community will see the folly of fencing against cattle; for rails are now worth there from sixty to seventy dollars a thousand.

In a purely economical point of view, we are opposed to allowing live stock to run at large without a shepherd or herdsman, to bring the animals home to be yarded or folded, and thereby enrich the home farm or plantation by their manure. Under the daily care of a keeper, stock may range for miles without depredating on any cultivated crops, and enrich their owner and the State by their products. In this way they will enrich arable fields by their droppings at night, and trespass on no man's rights of property. They will promote civilization and augment wealth, instead of retarding the one and damaging the other.

Stock-Husbandry is regarded by us with no inconsiderable favor when right managed. The Creator of the animal kingdom called into existence "the beasts of the field" for a wise and useful purpose. They sustain certain natural relations to plants, which no cultivation of the soil should fail to study and understand. Our present system of fencing against live stock, of turning them out to shirk for themselves, and too often steal their living or starve, is bad every way; and it belongs, legitimately, to the dark ages of semi-savage life. It virtually excludes them from plantation economy, and makes them enemies and trespassers where they ought to be friends and profitable occupants. Under a wise system of rural economy, cultivated plants and cultivated animals harmonize admirably, as do the vegetable and animal kingdoms everywhere; but let our stock be fenced in, rather than our corn and cotton. These and other crops will never travel off their owner's land to injure others. As much cannot be said of hogs, sheep, cattle and horses. Why should not the owner of

these be bound to take care that they do no damage beyond their legitimate range? Why protect by law an hundred dollars worth of property in hogs at a cost of one thousand dollars worth of fence in the precinct or district? Such practice is based neither on *right*, nor on *common sense*. Ten thousand dollars in grain and cotton should not be jeopardized, if not fenced, that one thousand dollars in stock may live very much as wild beasts subsist. We respectfully urge the principle that, after a community has made considerable advancement in civilization, and wisely desires to make still farther progress, this colonial system of keeping stock should be discontinued, simply because it has ceased to be adapted to the condition, and to the wants of society. The garments that fit and become a child in infancy cannot be worn after it is an adult. It is time the planters of Georgia put off their pin-a-fores, and prepare themselves to do at once and successfully whatever their present circumstances demand, regardless of prejudices and traditions which had their origin under an entirely different state of things. Relieve the great planting interest of Georgia of the oppressive tax of fencing crops, and the latter will soon be doubled in value, for the almost equal benefit of the whole population of the State. The varied fruits of tillage feed all and clothe all; and all should unite to render Tillage productive in the highest degree. It should not be burdened with unnecessary taxes of any kind; and if the labor and money now expended on frail and rapidly decaying fences, were wisely applied to the production and purchase of manure, hill-side ditching, reclaiming swamps, and deeper plowing, the benefits that would result are incalculable. The cultivators of the soil constitute a large majority of the voters, and may easily dispense with the tax of fencing against hogs in a part of the State, as an experiment, if they see fit so to instruct their law-makers at the next session of the Legislature. No harm that we can discover is likely to arise from the free discussion of this Fence question; and in case nothing is done to lessen this grievous tax, then we shall suggest the propriety of cultivating a few acres of black or yellow locust, on every farm for fencing purposes. The writer has had some experience with this very durable tree, as fence posts and bars; and regards it as the cheapest timber that can be grown in Georgia for the uses indicated. It grows readily from the seed; and a grove of ten or twenty acres will yield, in a few years, much rail timber, and trees large enough for railroad ties, fence posts and bars. Late years, we have ceased making zig-zag worm fence, preferring posts and bars in a straight line, on many accounts. We use chestnut posts when neither cedar or locust can be had.

By growing locust for posts and bars, making straight fence and using only three bars to a pannel to turn cattle, (not fencing against hogs) the expense of maintaining an adequate protection against stock is greatly reduced. Any reduction of cost in this matter will be acceptable to agriculturists; and the way to diminish taxation in this line is to provide in advance a fair supply of the most durable fencing timber. It is not likely that all fences will ever be dispensed with, and good materials should be grown on every plantation where they do not already exist. Chestnut trees grow with uncommon rapidity, and are easily split into rails. The nuts or seeds should be planted before they become dry, and soon after they are ripe. A dry seed rarely, if ever, germinates.

Forrest-culture, as well as the cost of fencing improved land, has been too much neglected in this country. A little care and timely labor may save thousands of dollars to the next and succeeding generations. Not only our fences, but our wooden dwellings, stables, and out houses, last only a few years, and must be renewed or abandoned. The annual consumption of timber and lumber is enormous, and constantly increasing with the increase of

population. To meet this growing demand, land-holders should save all valuable forest trees from waste in needless fencing, and from destruction in many other ways. L.

BARN YARD MANURE VS. GUANO.

MESSRS. EDITORS—It is gratifying to an amateur of his profession to see a spirit of progression pervade the ranks of his brethren; and whilst it is to be regretted that the tillers of the soil have been the last to see and feel the importance of departing from the old beaten track—the last to avail themselves of the improvements of the age and the advantages of scientific research—it is gratifying to see that they too are becoming alive to the importance of a change in their farm economy.

One of the important means of improvement is in returning to the soil, in some form, a little more of the fertilizing elements annually than are consumed in the production of the crop tilled. How to do this in the most economical manner, is the great desideratum to be attained by the practical Agriculturist.

That much is being effected by the use of the various concentrated and other manures, is a fact known to all intelligent men. Never having used any manure but of home manufactory, I cannot speak experimentally; but from what I have seen of the experiments of others, and have been able to gather from various sources, I have been impressed with the importance of using a while longer a home manufactured article.

If it be true that Guano does not produce but one crop, it is very questionable with me whether it will pay beyond the garden, orchard, or turnip lot, at present prices, with the high freights many localities have to pay.

One thing we do know, that stable and lot manure, well saved and sheltered, pays well for the labor bestowed, when properly distributed. The manuring system in the planting States is in its infancy, and is neither understood nor appreciated as it should be. But the time is near at hand when the making of manure upon every well regulated farm will be a "fixed fact," and the planter or overseer who neglects it must sooner or later pay the penalty annexed, we believe, to the violation of a moral obligation. If, we, as republicans and philanthropists, are bound to transmit to posterity a good government, are we not under still greater obligations to our children and families, to leave them a homestead improved and beautified, which shall be to them a rallying point, around which will cluster many pleasing reminiscences and associations of early life, and may be the means of restraining and bringing back the prodigal son to the home of his youth, where the kind admonitions of friends may yet reach and reclaim him?

You will please pardon me for digressing from the subject. It was not my intention to write a moral lecture, but simply to pen a few thoughts upon practical Agriculture.

The saving of manure is so simple and easy, that it would not seem necessary to give any plan. And yet how few take the time and trouble to make as much as they can distribute on their farms annually. We should have regard to the quality as well as the quantity we make. It does not pay to haul to a distance manure that has been exposed to the leaching rains of winter, and any one who will take the trouble to save and shelter the manure from their stables alone, one winter, will, not, we believe, be found leaving it exposed again to the weather. It would be economy, even in hauling, which would be a minor advantage, compared with its value as a fertilizer. The writer has found, by using leaves and straw freely in and about the stalls and lot, that it contributes greatly to the comfort of stock, whilst it preserves their droppings, and if taken up as soon as well saturated, and another layer of the same material spread, will make a quantity

of manure that will surprise any one during the winter. We believe the quantity of manure saved alone during the winter, would be a fair compensation for providing and feeding cattle well. It is necessary to give them a variety, but we find turnips a cheap and most excellent food, cooked or otherwise.

During the summer, it is better to pen on lots where you wish to raise turnips, small grain, or winter grasses, and turn under occasionally six or eight inches deep. I should like to say much more, but I am already making this article quite too long.

Allow me to make a quotation from an eminent European writer, (Johnston,) and I have done with this subject.

"The practical farmer who uses every effort to collect and preserve the manure which nature puts within his reach, is deserving of praise when he expends his money in the purchase of manures from a distance, of whatever kind they may be; but he on the other hand, is only open to censure who puts forward the purchase of foreign manures, as an excuse for the neglect of those which are running to waste around him."

In the July number of your paper, in giving my plan of putting up the Sweet Potato, you make me say three or four boards on the top of the hill. It should be three or four feet boards. I prefer having at least one-third of the hill well sheltered.

Those who planted on the little "patch" plan this year, did not have a large crop to save in this region of country.

To ensure a good crop of potatoes, as of corn, we should always cultivate land enough to make plenty, should the season be unfavorable or "a bad crop year." We may by this course sometimes make a surplus, but we seldom hear a man complain of having made too much; and his chances for another crop are always better, with a fat team and well filled barn.

Enclosed I send the subscription fee; at the risk of being styled a "book farmer," I wish to read another volume of the *Southern Cultivator*.

Wishing you a pleasant New Year, and that success which your distinguished efforts, in the noble cause you have espoused entitle you.

I remain very respectfully yours, &c.,

J. R. JACKSON.

Clinton, La., Dec., 1854.

SYSTEM ON THE PLANTATION—LETTER FROM MR. AFFLECK.

To ———, Esq:

DEAR SIR—The remark in yours of the 18th inst., surprises me no little—that "for myself I have no hope of ever getting an overseer who will or can keep such a book" as my "Plantation Record and Account Book." And that you are now "trying to teach one—perhaps my best—who has 100 workers under him, to write, and to read my writing!"

An overseer unable to write, and yet entrusted with the management of a property worth, I presume, from \$150,000 to \$180,000; and the happiness, to a very great degree, of some 150 souls! In what other business would such a risk be run? And yet it is by no means an uncommon state of things. Still, in your case, I was well aware that if men really competent for such an employment and position could be had, you would have them. And hence, infer that your overseers, as a class, are thus ignorant.

Here, it is not so. There are many overseers here who are men well educated and fully competent to the responsible charge of large plantations—in not a few instances, much more competent than their employers. They are able to keep a good and do keep their Plantation Books in a satisfactory manner.

When I first commenced cotton-planting, having been trained in Scotland to the strictest business habits, I was astonished beyond measure to find that it was almost impossible to find an overseer who would ever listen to an idea of the kind—as to keeping a plantation book. They would note the daily picking of cotton and the weights of the bales as sent off—but nothing else. That would not suffice for me. I looked around amongst my neighbors and found some few who had kept regular plantation books for many years. I examined these, and gained many valuable hints. But the great difficulty was, the entire want of uniformity, or of anything like a general system of management recognized by all. During my first year's planting, I prepared two books *with the pen*, almost identical with that now published for the cotton plantation, and gave one to each of my next year's overseers, *making it a part of my contract with them*, that these books were to be correctly kept and returned to me at the end of the year. And, with a little assistance and encouragement, *it was done*. And what a satisfaction it was to me! Soon after that, at the suggestion of a New Orleans Publisher, I prepared him a transcript of the plan for publication, and the books were published. For years, they went off slowly, *but surely*. Now, as I mentioned, the edition of 2,000 for the present year will all be sold.

Already a vast improvement in the overseers themselves is observable, and certainly in the system of plantation management and discipline. Think of the advantage to both planters and overseers, of even 1,000 books of written from day-to-day experience, scattered over the country!

At first, overseers were strongly opposed to any such evidence of a strict responsibility to their employers; and to the trouble of a daily entry of what occurred upon the place; a quarterly inventory of stock, tools, &c., &c. But they had no alternative—it was made a part of their contract, and *must* be done and done well. The effort was made, and the task found to be not so very serious a one after all. It even helped to while away an hour of an evening; and the retrospect passed many a wet day off pleasantly. The hand-writing improved. Business habits were induced, and everything moved along more smoothly. Overseers found that their assurance that they had "been in the habit of keeping one of Affleck's Plantation Books" was no small recommendation to desirable situations. They found, too, that, in fact, their responsibility was lessened rather than increased. "Here are my written orders—there is the proof that they were carried out—for the result I am not *alone* responsible." Then, again, an able and intelligent manager, who leaves his corn cribs full; stock increased in number and in fine order; the negroes comfortably housed, fed and cared for; implements made at home; sundry improvements carried out on the place; and withal a very fair crop of cotton made and sent to market in good time and fine order; is followed, perhaps, by one who has established for himself a reputation with many employers, by making an enormous crop of cotton! "I made, last year, for Mr. ———, upon his worn place, with so and so hands, so and so bales of cotton." Ah! he *is* a manager!—ten—twelve bales to the hand! Not a word of the active, healthy, not over-worked hands; the full corn cribs; abundance of fodder, peas, potatoes, &c.; the hogs killed and meat cured; the fine teams, good fences, poor spots manured, wet places ditched, roads well worked, gin house, scaffolds, &c., in fine order, with which he commenced the year—all the work of his predecessor. Nor of the condition of things *then* upon the place—the exact reverse of all this. His big crop proving to be a serious loss to the employer, in the end.

To those managing estates as Executors, Guardians, &c.; these books are invaluable. A prominent New Orleans factor gratified me not a little recently, by remarking that he has little hesitation in advancing to or accepting for a Planter who kept his Plantation Record and Account

Book correctly, requiring the same of his overseer—"such planters knew what they were about, and, in fact, rarely asked for advances." Instances have already occurred in the Courts, in which the overseer's daily entry in his Plantation Book was received as evidence, in the same manner as the entry of a Merchant's clerk in his Day-Book.

But I have spun out my letter far beyond what I intended when I sat down to reply to yours.

Many thanks for the blank leaf from your own Plantation Book. It suggests a vast improvement to mine, which I shall make in my next editions. Pray favor me with a copy of your Plantation Rules. Some one in Richmond, Virginia, I believe, has published an almost literal reprint of my books; but with the part of Hamlet omitted! Most shabbily gotten up, and some of the most important records left out.

We think it, here, *indispensable* that the cotton picked by each hand each day should be recorded. If for no other purpose than to *compel* a uniform and invariable system on the part of the overseer. There should be no omissions. I have not time to point out all the advantages; but they are many.

I have been compelled to omit many things I should like to have included, to avoid complication. The planter himself should keep records of each field, &c. My plan is, a skeleton map of the plantation, *cut out of Bristol board*, leaving a net-work of the board, for the boundaries of the fields, &c., of about a quarter of an inch wide, upon which the Nos. of the fields are noted, their contents, when cleared, &c. This is laid over a blank sheet, and sketched around with a pen, leaving a copy of the skeleton. In the space marked out for each field, notes of the crops are made, &c., &c. But I must close.

Yours very respectfully,

THOMAS AFFLECK.

Washington, Miss., Jan., 1855.

SAVE YOUR NIGHT SOIL.

THE following, from the *Edgefield Advertiser*, contains more "truth" and good sense "than poetry." That the most valuable of all manures [human ordure] should receive so little attention, while our ships are scouring distant seas in search of the "far fetched and dear bought" guano, is one of those inconsistencies that to us seems entirely unaccountable. False delicacy and silly squeamishness should not prevent us from availing ourselves of a fertilizer so valuable and accessible:

Messrs. Editors—I congratulate your readers on the agricultural arrangements of your paper and have but few remarks to make. Why do farmers save their stable and cow, and hog-pen manures? Because their daddys did before them. *Nuf sed* about chemico-meteorological modus operandi of their application to corn, wheat and cotton lands. But just ask them why not save night soil, and a laugh is the reply.

Well, now for our new way of making old bacon and old corn. One negro will consume in 12 months 144 lbs. of bacon at 10 cents \$14.44
13 bushels corn at \$1 per bush. 13.00

\$27.44

Now, the same negro will produce "in liquid and solid excrements on an average 1 1-2 lbs. daily (5-4 lb. of urine and 1-4 lb. feces), and that both taken together contains 3 per cent. of nitrogen; then in one year they will amount to 547 lbs., which contain 16.41 of nitrogen, a quantity sufficient to yield the nitrogen of 800 lbs. of wheat, rye, oats, or of 900 lbs. of barley."

This 547 lbs. of domestic African Guano, with 100 lbs.

of pulverised charcoal and 200 lbs. of gypsum or plaster to fix it, costing about \$3, and worth as much as Peruvian Guano, say \$25, will manure 4 acres of wheat (on land producing without manure 6 bushels,) and produce 20 bushels of good wheat per acre.

Then 80 bushels wheat at \$1 \$80.00

Deduct 24 bushels at \$1 24.00

\$56.00

A little more than clear gain enough to pay for the old bacon and corn consumed by the same negro, in the 12 preceding months, and leave a balance, to pay for the interest and trouble of making the calculation. This is what a young American farmer would tell an old fogey to be a new way of making old corn and old bacon.

TRY IT.

SALTPETRE FOR CURING MEAT.

A FEW years since, upon the occasion of a large fire in New York City, considerable discussion arose upon the question, "*Will Saltpetre explode?*" We are not aware that the public mind has ever been fully satisfied upon this subject, nor do we now propose to bring it up again. Our object is simply to call the attention of our readers to the too frequent use of this dangerous article in curing meat, and to suggest its discontinuance. The *Dollar Newspaper's* correspondent, "Doctor," gives us his views upon the matter, as follows:

A few days ago, perusing the *Albany Cultivator* for 1846, I was not a little surprised to find the following recipe for preparing meat for salting for long sea voyages:

"Take half a pound of black pepper, half pound of red or Cayenne pepper, half a pound of the best saltpetre; all beat or ground very fine; mix these three articles well together, then mix them with three quarts of very fine salt."

[Signed] NOYES DARLING, New Haven.

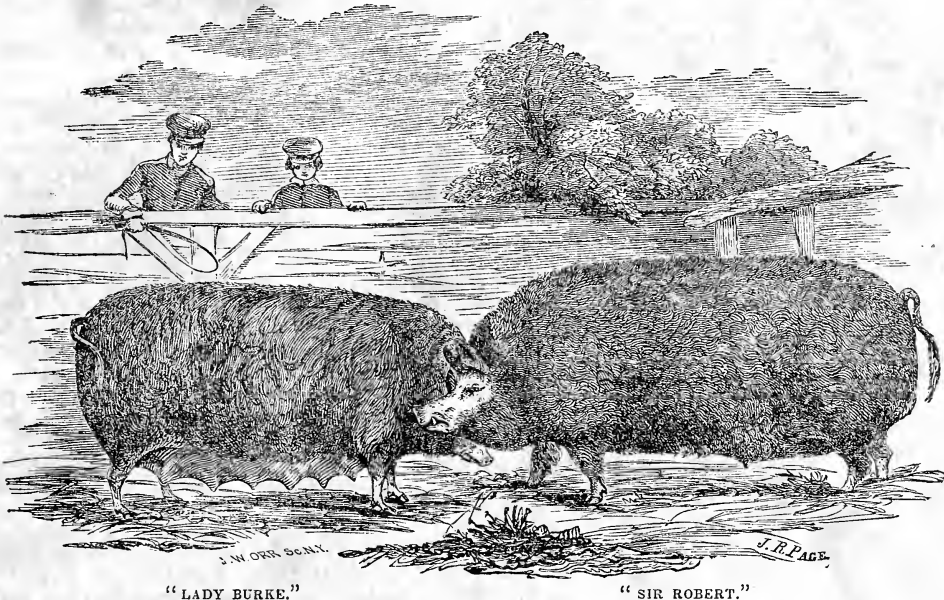
And after detailing the manner of applying it and salting beef, he says: "Provisions salted in this manner will keep during the longest voyages, and are more wholesome and palatable than any other." But I imagine if the gentleman would take the trouble to consult medical authors, or observe more carefully the effects of meat thus cured by a compound containing saltpetre, he would sooner become a Grahamite [vegetarian] than hazard his life by using it, when cured by his own process.

On inquiry, I find that many of my neighbors are making daily use of meat and butter wherein a small quantity of this deadly drug is infused, and imagine it renders the meat more tender, and easier of digestion and more wholesome, and are not sensible of any deleterious effects from its use. But there are instances recorded by medical authors, where arsenic and other poisons, by beginning with small portions, have been used, and the quantity increased moderately for years, without any apparent bad effect. But the patients died suddenly, and on a post mortem examination it was found that the delicate fibres of the stomach were entirely destroyed, and may not this be the case when saltpetre is used?

Thatcher's Dispensatory says: "This powerful salt, when inadvertently taken in too large doses, is one of the most fatal poisons."

Cox's Dispensatory says:—"In large doses, such as an ounce, taken at one time, it produces the most dreadful symptoms—constant vomiting, purging, convulsions and death."

Dr. Tompson's New Guide to Health says: "I have found by a series of experiments for many years, that saltpetre has the most certain and deadly effect upon the human system of any medicine known."



"LADY BURKE."

"SIR ROBERT."

BERKSHIRES,

THE PROPERTY OF L. G. MORRIS, MOUNT FORDHAM, N. Y.

"SIR ROBERT" was winner of the 1st prize in his class, as large breed, at the New York State Show, in 1854. "LADY BURKE" was on exhibition, with ten pigs, and received commendation from the Committee. The Berkshire Swine, such as I have imported, are as large a breed as this or any country should desire; possessing great length and rotundity of body; very prolific, and a skin and hair well calculated to stand any climate; very hardy, and easy keepers, and will weigh when matured (in proportion to keep) from 400 to 600 pounds. L. G. MORRIS.

MEDICAL USE OF SALT.

IN many cases of disordered stomach, a teaspoonful of salt is a certain cure. In the violent internal aching, termed cholice, take a teaspoonful of salt and a pint of cold water—drink it and go to bed—it is one of the speediest remedies known. The same will revive a person almost dead from receiving a very heavy fall, &c.

In an apoplectic fit, no time should be lost in pouring down salt and water, if sufficient sensibility remains to allow swallowing; if not, the head must be sponged with cold water until the sense return, when salt will completely restore the patient from the lethargy.

In a fit, the feet should be placed in warm water, with mustard added, and the legs briskly rubbed, all bandages removed from the neck, and a cool apartment procured if possible. In many cases of severe bleeding at the lungs, and when other remedies failed, Dr. Rush found that two teaspoonfuls of salt completely stayed the blood.

In case of a bite from a mad dog, wash the part with strong brine for an hour, then bind on some salt with a rag.

In toothache, warm salt and water held to the part, and renewed two or three times, will relieve in most cases. If the gums be affected, wash the mouth with brine; if the teeth be covered with tartar, wash them twice a day with salt and water.

In swelled neck, wash the part with brine, and drink it twice a day until cured.

Salt will expel worms, if used in food at a moderate degree, and aids digestion; but salt meat is injurious if used much.—*Scientific American.*

☞ Never half do anything; you may thus lose more in one day than a month can restore.

MR. PARLIN'S COMPOST.

MR. HORACE PARLIN, of Massachusetts, made the following statement, in December, to the State Society, of his mode of manufacturing manure:

"In making my statement, it may be well to give the construction of my stable and manure shed. My manure shed is 46 by 16 feet, covering the heaps from the stable windows, and also a space before the stable door 12 feet wide. The bottom of the shed and the whole cattle yard is clay, water tight. My lean-to floor is in the usual form, a double floor where the cattle stand, with a space behind them lower by the thickness of the second floor. My cattle are stabled every night, summer as well as winter.

"The material used is muck, dug a year before using and decomposed with lime slaked in brine strong as can be made, four bushels lime to a cord of muck. A quantity of this muck is thrown behind the cattle at night to take up the urine, and thrown out in the morning with their manure. About once a week we shovel these heaps to the back of the shed and cover it with muck, when it heats and in a short time is fully prepared for use. If it remains too long in the heap it will fire-fang.

"I have also a space under my stable floor about three feet deep, which we fill with muck and exchange it once a year. The urine I consider of equal value with the solid excrement.

"By this method I made, from two oxen and three cows, forty-five loads of about thirty-five bushels each, from about the first of June to the first of November, of compost equal, I think, to stable manure."

☞ Often inspect your stock and keep a sharp look out for disease and accidents.

"DEATH IN THE POT"

Messrs. Editors—"Death in the pot" has long been a common expression among all classes of society. When, or under what circumstances it originated, is a matter of no consequence to my present purpose. There is doubtless as much truth in the expression at the present day as at any former time—far more, indeed than is generally thought of. There is disease and death in nearly every pot! And yet how few of those who complain of "bad health" ever look in that direction for the cause of their sufferings—how few ever once think of the fact that the many ailments of which they are continually complaining, proceed from disordered digestion, brought on, in a vast number of cases, by the silly practice of saturating their food with alkaline compounds.

The fearful increase of that "familiar complaint," Dyspepsia, within the last fifteen or twenty years, calls aloud for reform. And who that values his own health and that of his family can be indifferent upon this subject? Many ignorant people, however, do not know that the alkalies, such as they use every day in their food, possess any poisonous or other mischievous property at all. Physicians understand this matter, and they are everywhere agreed as to the pernicious effects of the long continued use of alkaline compounds. Some of these I will enumerate. They are: aphthae and ulcers in the mouth; tender gums; early decay of the teeth; fetid breath! difficulty of breathing; sallowness of the countenance; weariness; functional derangement of the liver; impaired digestion; dyspepsia, with its *innumerable concomitants*.

Alkalies were formerly used only in making flour bread, and to a limited extent. Now they are indiscriminately and lavishly used in all sorts of bread, as well as all sorts of pies, tarts, puddings, salads, meats, and nearly everything else! Is it any wonder that so many people complain of "*a hurting*" in their stomachs? Is it any wonder they have "*got a misery*" in their sides, and frequently become alarmed with the notion that they are "*about to take the breast complaint*?" O, ye dyspeptics, ye lean hypochondriacs, and ye melancholy, look to your pots and tables, for it is here, and only here, that the source of all your misery is to be discovered. Take care what you eat. *There is death in the pot.*

Reason, experience, observation, all teach us that these corroding and highly offensive alkaline substances were never designed (except as medicine) for the stomach of any living creature. Besides their corroding and irritating qualities, they are *chemically incompatible* with the healthy secretions of the stomach upon which digestion mainly depends, and will necessarily always weaken that process exactly in the proportion that they weaken or alter the healthy acid of the stomach. If the alkali is sufficient to neutralize, perfectly, this natural secretion of the stomach, of course digestion cannot take place at all. The same thing happens from over-eating. The result in either case is the same—indigestion. And here is the whole secret of that very common and much dreaded complaint, dyspepsia. It is brought on by the improper use of alkalies, over-eating and indolence. The remedy is too obvious to need mention.

But why do people use alkalies in their food? I confess my total inability to solve this question; to me, it is a perfect mystery. Surely no one will pretend that any article of food is in any way improved by the addition of these things. On the contrary, they always spoil it. It is well known that bread made up with any alkaline substance always loses its natural sweetness and relish; and if butter or lard be added, it acquires a strong disagreeable odor, as of *new soap*. And here I would suggest to such as are determined to continue the practice of spoiling their bread, that when soda or saleratus is not at hand, a little *soft soap* will answer the purpose pretty well.

In conclusion, good flour bread can only be made at the expense of much kneading. With corn bread it is different. It only requires to be made up with simple water (better without salt) and to be well baked.

QUINATI.

Mississippi, 1854.

"RESCUE GRASS"—REPLY TO "ALGERNON."

Messrs. Editors—A friend has just placed in my hands your excellent paper for January, 1855. I find in it a communication signed "Algernon," in which that writer takes the liberty to assert "That the origin of the so called Rescue Grass is fully established by irrefragable testimony as the Texas Oat Grass." I have seen and read several letters of late published in your very able journal under different assumed names, all making the above positive assertion; I have good reasons for knowing that all of these letters are from one and the same source. If am not mistaken as to the author, I must confess to some surprise at these continued assertions. With the author of two or three of them I have, since their publication, had several friendly conversations, in which I fully gave him positive and reliable evidence that he was wrong in his statement about the identity of the grass. If he is the "Algernon" in your January number, then I must believe his motive is unfriendly either to me, personally, or, to the excellent Winter Grass which I have endeavored to introduce. What irrefragable testimony this writer may have for his bold assertions, I find he takes good care to keep to himself. I call upon "Algernon" to produce this irrefragable testimony.

Assertion, and assertion alone, no matter how often repeated amounts to nothing. There is a way (and it is the correct way) to determine what the Rescue Grass, or properly "*The Ceratocloa Breviaristata*" really is. Let specimens be submitted to Professors TORREY and GRAY or to any other eminent Botanist, and if they, or any one of them shall say that the "Rescue Grass" is the "Texas Oat Grass," or any other "oat grass," or any kin of the "Avena," then I will yield, but not until then. This proposition to submit the Rescue Grass to the ablest Botanist of the country for examination and classification, is certainly fair, and every way the proper course. If "Algernon" refuses or rejects it, then his motive will appear plain to every one. As to the test he speaks of between his patch of Rye and the Rescue, I have nothing to say. I do not know, indeed, whether "Algernon" planted seeds of the Rescue Grass or not. I will say, however, that the fall and winter, so far, have been entirely too dry for it. As an evidence of this I find my grass now not over 20 inches high, while at the same period last year it was over 30 inches, in the same ground. I am well satisfied "Algernon" will yet admit before May next that the Rescue (if in truth he has it) is the most valuable winter grass he ever planted. I am sure of it when he comes to give it a fair trial and the season shall be more propitious. He will find, in time, that his stock of all kinds will eat it in preference to Barley itself, which, we all know, is a greater favorite with them than Rye.

I will now, Messrs. Editors, make an assertion about the Rescue Grass (so called by me; but whose proper name is "*Ceratocloa Breviaristata*") which has *irrefragable testimony* to support it. I say that it is not an oat, never was nor, indeed, ever will be. I say it is a distinct variety of grass and ever will remain so. I will give high and reliable authority, irrefragable testimony, against which the mere "ipse dixit" of "Algernon," unaccompanied with proof, cannot, and ought not to weigh a feather. In the month of May, 1853, I got my friend, Dr. HUGH NEISLER, of Ala., (of very considerable reputation as a Botanist, but who was unable to say what the grass was) to write Professor TORREY, of New York, accompan-

ied with specimens of the grass, then in seed, to define it for us. The day after the reception of Dr. NEISLER's letter containing the specimens Prof. T. replied to us that it was the "*Ceratochloa Breviaristata*"—in English, "Short awn Horn Grass," from the resemblance of the points on the heads to the horns of cattle. That it is a distinct variety of grass, having the largest seed of any known grass of equal nutrition. That it is a native of the Pacific coast, and if climatized, it would be exceedingly valuable for grazing stock, for making hay, and as a fertilizer. It is proper for me to say, that up to the time of the reception of Prof. TORREY's letter I thought this grass was the wild oat of California, and it was so called. In order to be satisfied upon this point I got Dr. NEISLER to inform Prof. T. of this opinion. He assured us it was not an oat nor any kin of the oat family, and he proved it by sending us specimens of the wild oat of California, to show the difference. He wrote us that he had specimens already of the "*Ceratochloa Breviaristata*" (the same as sent by Dr. NEISLER) in his Herbarium, and referred us to HOOKER's late Botanical work for a full and true description of the same. Prof. T. says (which is no doubt true) that the wild oat of California and Texas is a true "*Avena*" and nothing else, and was introduced by Catholic Padres at the time of the establishment of Missions in those countries. Now, Gentlemen, I take the above to be good and irrefragable testimony. Certainly it is more reliable than the windy declarations of Tom, Dick or Harry. Prof. TORREY has made Botany a profession and study of life, and surely he ought to be as well posted up on all plants—their right name, class, native place, properties, &c., &c.—as "Algeron," or Mr. anybody else.

Your obedient servant,

B. V. IVERSON.

Columbus, Ga., 1855.

TURPENTINE PRODUCT OF THE SOUTH.

THE following is the report of a committee appointed on the part of the turpentine producers of Alabama, in December last:

The committee to whom was referred the resolution of Colonel James, upon the subject of the cultivation of turpentine, &c., beg leave to make the following report: That the character of the soil best adapted to the production of the turpentine pine should be of light and porous nature, with a subsoil of clay, capable of retaining moisture. The pine should be of an extended low-growing top, with thick bark and sap-wood—the trees not to stand so thickly upon the land as to be too much shaded by the overgrowing foliage. The number of boxes to be cut in a tree should be governed by the size of the same. As a general rule for cutting boxes, the committee recommend the following standard: The box to be thirteen inches in horizontal width, three and a half inches in horizontal depth, and seven inches in perpendicular depth. This will produce a box of the capacity of one and a quarter quarts, which, after a few year's use, will be reduced to a box capable of containing a full quart only; which, from experience, your committee believe to be the most profitable size. Taking a tree capable of sustaining two boxes, they would recommend that the boxes be cut side by side, with a life-streak of bark of four inches intervening between them, in preference to cutting them opposite to each other, and that one-third or more of the bark should be left for the support of the tree, the boxes to be cut just at the bulge of tree near the root of the same. The corners of the boxes should be cut out with the inclination of the face of the box, and to extend in a line perpendicular to the outer corners of the same, so as to show a line horizontal and the top of the box—the object of chipping being to expose a new surface of the pores for the exudation

of the turpentine. The cut of the hacker should extend a half inch in depth into the tree, and one-fourth in altitude, and the chipping should be renewed once a week. The best instrument for the purpose is the hacker with a small bowl, to be kept exceedingly sharp, and the best instrument for sharpening the same is the stone known as the Siam hone or slip.

Your committee have nothing new to suggest or recommend as to the best mode of dipping, or the best instrument for that purpose; but in reference to the scrape or hard turpentine, they would advise the use of cloths instead of the old-fashioned box for receiving the same. The committee would recommend the light iron axle two-horse wagon as the most expeditious and economical for hauling turpentine. The frame for the barrels should be made of 4 by 6 inch scantling, with segments of circles cut therein, one-half across the upper face of the same to receive the ends of the barrels, with two interior parallel rails, so that when either end of a barrel is removed from the concave which it occupies, it can be rolled from the wagon on a smooth surface. The committee would recommend that when the distiller can avail himself of a hill side, the simplest plan to elevate turpentine to the still is to extend a railway from the top of the hill to the platform. If upon a level plain, the use of the machine employed by flour mills to elevate their sacks and barrels to the upper stories of the mill, the said machine being a platform, with four upright posts, with a roller at the end of each, two ropes from the roof of the still-house, passing beneath said rollers, (one on each side,) thence through sheave blocks and around a cylinder turned by a crank from below. In regard to preparing the turpentine for distillation, we refer you to the explanation made by a member of the committee, as to the style best adapted to making the best article of rosin.

The experience of your committee would lead them to decide in favor of a small size still, or with a flat and greatly extended surface. The committee would recommend that in distilling, the still should be charged to only two-thirds its capacity, to allow for the expansion of the material during ebullition. The amount of water to be supplied should be equivalent to the amount condensed in the still-worm, and kept in the same ratio so long as the spirit comes over, and should the still have a tendency to boil over, an increased amount of fuel is to be supplied until the excessive ebullition ceases; the heat is then to be diminished, and the still run regularly as before. Your committee deem it unnecessary to enlarge on this point, as they presume that in all cases of new beginners a practical distiller will be employed.

Your committee recommend that in addition to the usual mode of glueing the spirit casks, that the casks, being partially drained after each glueing, be placed upon a horizontal plane, each head alternately placed upon said plane, and would further recommend the use of the Scotch glue, in all cases in which the distiller is unable to manufacture his own glue from good sound hides. The committee would recommend that in making barrels and casks, the staves and heading should be fully dressed, ready for the truss-hoop, and be permitted to remain some time previous to being made into barrels, for the purpose of allowing the staves, &c., to shrink. By adopting this course the barrels are less liable to leakage. The staves for turpentine barrels should be 32 inches in length, the head to be worked in a 20-inch truss-hoop. The spirit cask should contain 45 gallons, and, in case oak heading cannot be obtained, would recommend the substitution of poplar instead.

Never be dependent. Eat your crust honestly earned. Look the world in the face; smile at its frowns and laugh at its malice. Use energy. Strive and still strive, and if all is lost strive again. Never say die.

BORDER WORK FOR THE PLANTATION.


MESSRS. EDITORS—Much has been said in former numbers of the *Southern Cultivator* about ditching, wire fences and hedging, for the purpose of turning stock from the plantation, and but little about the common rail fence. All this is expedient and right, particularly where timber is scarce, but where rail timber can be had rail fences will be made, as everybody can make them free of expense as to hiring. I therefore propose giving the readers of your journal my views about the latter kind of fence, and I give as my reason our large acquisition of fertile Territory now rapidly coming into cultivation. This necessarily will be the means of keeping up that kind of fence for a great number of years to come; therefore, should we not economise with our timber whilst we have it? it being too late to commence after it is exhausted. I presume it will hardly be necessary for me to say that the usual length of rails are 10 1-2 feet, and sufficient crook given in the worm to make a steady fence; but most persons are of opinion that large rails are preferable. This I think a mistake. There should be no more large rails made than to give weight sufficient to steady the fence, say the two top courses. And why should a small rail last longer than a large one? Because when a small rail gets wet it dries through before decay takes place; whilst a large one, when thoroughly wet through, never gets dry, and, of course, must decay. Some may say that small rails will wash away sooner by the rains. Well, I have had them washed by the rains fourteen years, whilst large ones have rotted in seven. This is from experience. Still all rails will rot by suffering green timber or bushes to hang over the fence. This can be easily remedied and made a matter of great convenience at the same time, by clearing a road, say 20 feet wide, on the outside, taking every tree out. If this is done when a field is first cleared, all the rail timber taken from the road can be used in the fence, and not a good tree be lost. This will also let the sun to the fence, and by keeping the corners clean, which every good farmer will do, causes it to last twice as long as otherwise, and will alone pay for making the road. It will also pay for itself in the convenience of getting around the plantation to reset the fence when needed (for all old fences should be reset every third year). It will more than pay for the making in the produce of the farm; for who can make corn or cotton under trees? And it will pay for itself in keeping squirrels off your corn; for they are not near so likely to cross a road to get to it. A road is also a great safe-guard in keeping off fire. I have known some persons to have their fences clogged up with briars and bushes so thick that in time of fire many parts could not be reached in time to save it. They may not have fought fire as long, but I have known them to fight it as hard as Gen. TAYLOR did the Mexicans at the battle of Buena Vista and lose their fence at last—all for the want of a road, which should be cleared around large plantations, for the convenience of the neighbors, if for no other purpose.

The above plan of keeping up rail fences, Messrs. Editors, I think is economizing instead of doing useless labor. I have tried it and invite others to do likewise, and to bear in mind that small rails will last twice as long as large ones. Some make their rails so large that they have to be notched down, like a cabin, to keep hogs out—there is no necessity for all this labor, when the rails are made small. It is also a saving of timber when made small; therefore, small rails with the fence corners kept clean and a road on the outside, saves timber, time, and money, and also makes it much more pleasant in getting around the plantation.

As usual, yours,

E. JINKINS.

Horse Pen, Choctaw Co., Miss., Dec., 1854.

 Lime should be accessible to poultry.

POST OAK GLADE LAND, AGAIN.

MESSRS. EDITORS—I find in the October number of the *Southern Cultivator* inquiries made of you, by "A Subscriber," dated Clinton, Texas, 1854, as to "Post Oak Glade Land in Texas." He says: "I want to know whether or not there is any method of reclaiming what we call 'Post Oak Glade' which is a wet land of whitish or ashy color, most of the growth being Post Oak, with a few scattering Pines." He further says: "Such lands are apt to bake after heavy rains." I think your advice to "A Subscriber" is somewhat injudicious, and hence this communication. "A Subscriber" seems to be a young or new farmer. You remark, "Post Oak Glade land is generally better adapted to grass than any other crop." In this I think you are wrong. I take it, this quality of land is better adapted to cotton than any other crop. I suppose it has too many silicates already without the use of lime.

Will "A Subscriber" try 10 acres on my plan? It will cost him nothing. Bed up the land in the spring, 5 inches deep, and that is very deep, (though I do not suppose he will think it deep until he puts the rule to it) elevating his bed as high as a "dagon" plow of this depth will do; plant on the top of the bed, covering shallow. In this county, I would not plant his land before the 1st of May; with him I advise him to plant at least one month after other planters. In cultivation, never go more than 1 1-2 inches below the surface, and in the latter part of cultivation, below 1 inch from the surface; cultivate either with a cultivator or with a sweep, cutting as deep at the outside of the wings as the point.

I am mistaken if "A Subscriber" will justly pursue this plan, if he does not gather from 1000 to 3000 pounds per acre. I am also mistaken from his description of his "Post Oak Glade Land in Texas" if it is not the very best cotton land in Texas. If I am right in the character of his land, it is a cold land, one on which, by ordinary culture, a good stand of cotton cannot be obtained. "A Subscriber" must not plant this land until hot weather has set in, and then only by elevating the plant above the level, and as far above as he can with 5 inches depth of bedding. I do not write to come in contact with your opinions, for I do testify I have been much benefited by them. I only hope to benefit a brother planter, which I look on as my neighbor, although living in Texas.

Very respectfully your friend,

JAS. THOMAS.

Lancaster, Hancock Co., (near Sparta) Nov., 1854.

LIME ON CORN.—I have just concluded an experiment with lime on a field of corn, which may be worthy of notice. As the corn was coming up, I applied about half a pint of slaked lime to each hill, with the exception of four rows near the middle of the field, which were left that I might see whether or no liming in the hill was beneficial to the crop. The after treatment was the same during the season.

Harvested separately the four rows unlimed, and also adjoining them four that were limed, (soil and situation being precisely the same) and the result was an increase of a little over one-eighth in the amount of corn in favor of that which was limed.

R. F. BINGHAM.

Elsworth, Mahoning Co., Ohio.

RAIN WATER A PREVENTIVE OF CHOLERA.—Mr. John Lea, of Cincinnati, in a long communication to the *Gazette*, states, as a fact, that "cholera never becomes epidemic in any district, or city, where rain or pure soft water is used;" and supports his statements by many important facts. He also states that, during five years past, not one well authenticated fatal case of cholera has occurred where rain water was exclusively used.

HOME.

HOME! in that word how many hopes are hidden,
How many hours of joy serene and fair;
How many golden visions rise unbidden,
And blend their views into a rainbow THERE!

Round Home what images of beauty cluster,—
Links that unite the Living with the Dead,—
Glimpses of scenes of most surpassing lustre,—
Echoes of melody whose voice is fled!

Home is the place where we have ever blended
Our hopes and happiness, our tears and sighs!
Whence our united worship hath ascended,
As grateful incense to the listening skies.

Where we have nourished bright thoughts while behold-
ing
Some sun-eyed flower, the centre of our love;
And while we watched its gradual unfolding,
The angels came and carried it above.

Mankind, however fattered and benighted,
How'er oppressed by penury and care,
Have their existence by ONE beacon lighted—
Have still ONE bliss which all may freely share.

Home! cries the world-sick wanderer, as he wendeth,
With baffled footsteps, o'er his weary way;
Home! sighs the wretched outcast as he sendeth
A longing look whence once he longed to stray.

Home! says the toil-worn rustic, when returning
From daily labor at the fall of night;
Home! sings the emancipated soul, as, spurning
This world of wo, it plumes its wings for flight.

Home, like the burning lens, collects together
Into one point affection's scattered rays,
And in the sternest storm, the wildest weather,—
Kindles a bright and spirit-cheering blaze.

Home is the watch-word, firing with emotion
The patriot's heart, and nerving him to fight;
Home is the pole-star, o'er the storm-swept ocean,
Guiding the sailor through the stormy night.

Home is a boon to erring mortals given,
To knit us closer in the bonds of love;
To lead our spirits gently up to heaven;
To shadow forth the brighter HOME above.

IMPORTANCE OF POULTRY TO THE UNITED STATES.

WE have often looked over the pages of our agricultural journals to find interesting matters of information about poultry, but generally in vain. There is very little said or written on this subject, which is really becoming one of great national importance. The value of poultry in the United States in 1840, was estimated at over \$12,000,000. The great improvement in quality and augmentation in numbers realized within the last 15 years, must carry it considerably beyond \$25,000,000 at the present time. It is much to be regretted that our modern Solons at Washington, did not think the subject of any attention in taking the last or any preceding census and statistics, as we are quite certain the aggregate value in 1850, must nearly equal that of sheep. We take this early opportunity of suggesting this item for the next census, and trust our future members of Congress, and our then Executive may afford us all necessary data on this interesting head in 1860.

Yet the estimate we make, however large it may seem to the uninitiated, represents but a small part of their annual

value. Nothing else that breathes in the service of man has such power of self-multiplication or productiveness as fowls. A choice young hen has been known to lay over 200 eggs in a year, and nearly all hens, with proper selections, attention, &c., may be young and choice. This is more than four times the value of the bird, and after deducting economical feed and attention, is more than double her value that may be realized per annum, in nett profit. Will one of our political economists please to indicate in what branch of rural or other industry an equal return can be made for capital and labor.

Nor does this represent the full value of our poultry. It is neither the capitalist nor most intelligent of our population, (who least need these large returns,) that generally reap the benefit of them. Happily for the poor and ignorant, this is just the kind of domestic stock which any of them can buy, and feed, and rear, however humble their mental capacity and pecuniary means may be. The young, the feeble, the halt and the invalid, can look after the poultry yard as well as the strongest, and some of the most successful of the devotees to this object, have been those whose physical disabilities have prevented their employment in more important avocations.

Great advantages follows the general rearing of poultry in another respect. The hen and duck are omnivorous, and to a great extent also are the turkey and the goose. Every species of grain, edible grass and vegetable; flesh, fish, insect and garbage are greedily devoured by the whole tribe of domestic bipeds. The pig, gourmand and cosmopolite as he is, is not more indiscriminate in his food than the subjects of our notice. What is everywhere produced, in everybody's way, and if not removed, would become offensive and injurious to the whole community, are by these incessant foragers, picked up, and at once converted into nutritious flesh, or wholesome eggs. And more than this, like the feathered tenants of the trees, they are often of incalculable service in thinning off or exterminating the insect pests of the farm and garden. Thus, what may become to the growing crop a most destructive brood of insects, may be transferred into a wholesome, useful, merchantable article. What myriads of grasshoppers are annually devoured by clutches of young turkeys, and how many acres of grass, oats, &c., are saved to the farmer by these and his other fowls. A friend informs us that his chickens, which are kept among his meadows during the summer, on an average of seasons, do much more benefit to his crops by the destruction of insects, than the entire cost of their feed and attention.

Some look with regret upon the recent poultry mania, which originated in New England, where most of our new notions are hatched. But we regard it as a down-right blessing to the country. It has set people to thinking, to comparing, and finally to importing; and we have thereby greatly improved the quality of our poultry, and advantageously and largely augmented their numbers—the direct and inevitable consequence of this excitement.

Others equally object to the importation of the larger breeds of fowls, the Asiatics, with their stalwart forms and awkward gait. Though no favorites of ours, in their most enlarged and ungainly proportions, we still differ, even in this, from objectors. We have no doubt they are destined to work a decided improvement in many poultry yards. They are great layers. The experience of nearly all who have tried them is unanimous in this. They begin to lay early, when five and a half to eight months old, and lay pretty steadily ever afterwards. The breeders generally agree, that they and the cross breeds are the only fowls to be relied on for winter eggs. These are also alleged to be particularly rich, and one friend assures us that two Shanghai eggs are worth three of the Black Spanish, though the latter are the largest. Their flesh, too, is fine in the chickens, and it is not good in any other family of older fowls, unless Capons. They require a good deal to

fill their craws, 'tis true, but it is not always the largest bodies that require the most food; on the contrary, the fattest men frequently are the smallest eaters; and we all know that the Short Horn cattle, the Leicester sheep, and the Suffolk and China pigs yield a good deal more flesh for the food consumed than smaller sizes of the unimproved animals.

There is a physical organization that determines for a particular style of animal life, (whether it be individuals or classes of animals and birds,) what is the relative proportions of the food consumed, they will retain in their carcass. The wolf, the catamount, the weasel; the eagle, the owl and the crane, each make a poor return in flesh for the food they devour, however large the quantity, or rich the quality; and contrasted with the useful quadruped and biped, they show the wonderful difference in nutritive, assimilating powers. We claim no superiority in the fattening powers of the Asiatic fowls, we barely concede the possibility of it, but are willing to yield credence to well tested, long-tried, reliable experiments, when properly presented. But this much we do know, that they are no flyers, indifferent walkers, and when fully supplied with food, are disposed to sit quietly on their haunches and chew their cuds in dignified ease, not caring to busy themselves in the adjoining fields and gardens, hen-hussying about, gadding and tattling among their neighbors. They are certainly domestic birds, whatever else may be said against them; and to this trait of character, in an eminent degree, is attached thrift and economical feeding. We believe they may be bred to smaller size and greatly improved form, and some species thus improved we have seen, that would do credit to any poultry yard.

So, too, of the games, which have been almost entirely discarded from our economical yards. The larger breeds, of compact forms, and short legs, full body, &c., are sometimes found to be essential in restoring character and giving tone and stamina to the ailing or effete birds of other choice breeds. The whole subject of crossing fowls is one of great interest and importance, and may challenge the attention of the most intelligent and discerning.

There is another important matter connected with this poultry subject, not to be estimated by dollars and cents, but of far more consequence than either. It is the social and moral influence they exert, especially on the junior members of our families. The flower and vegetable gardens, the ornamental lawns and useful fields are all attractive, with their varied products of beauty and utility; yet they fail to enlist that sympathy and feeling which attractive animal life affords. How very much more of interest the pet horse, or cow, or lamb excites among the little ones, or even among the seniors, than the choicest among the trees, or shrubs, or flowers. And as we descend in the scale of size to certain limits, we intensify the interest of our children in the domestic pets. The tenants of our poultry yards, with their youngling broods are, of all other things, what earliest catch and rivet their attention, and determine their devotion to rural life. By thus withdrawing their thoughts from frivolous games, vicious sports, and indulgences, or idle, worthless habits, a great point is gained towards developing and maturing the future useful members of society. Comparatively few who have not the advantage of an extended farm, can indulge in the luxury of improved flocks, and extensive herds; but almost every one, not closely hemmed in by the brick walls of a city, can gratify their own taste, and excite that of their children, by keeping a few choice fowls. They are far preferable to the usual pets—dogs, cats and singing birds; there is less danger from disease from them, much more variety, more scope for ingenuity in rearing and attending, and we need not add on which side the profit is likely to be. If for no other reason then, than to interest the children in a useful, attractive pursuit, we would say

to any person who has the room, by all means keep some select poultry.

We shall not pursue this subject further at this time, and our sole motive now has been to invite attention and correspondence from experienced and observing breeders, as to the best variety, mode of feeding, rearing, &c. Let every person express his preferences, if he will give but a substantial reason for them. We ask for the fullest discussion consistent with the capacity of our pages, only let it be sensible and to the point. We shall cheapen beef, mutton, and pork, and largely too, by giving every family a fine flock of poultry, to which they can resort when necessary, instead of depending solely on the butchers, when they choose to put up choice pieces to 18 and 25 cents per pound. This result has already been measurably felt the past two seasons, as is shown by the incredible quantity of poultry forwarded by railroad to the Atlantic markets, whenever the temperature admitted of their transmission. We hope to see this field of enterprize extended, till all who have the means for doing so can participate in the luxury and profit of a choice and varied poultry yard.—*American Agriculturist.*

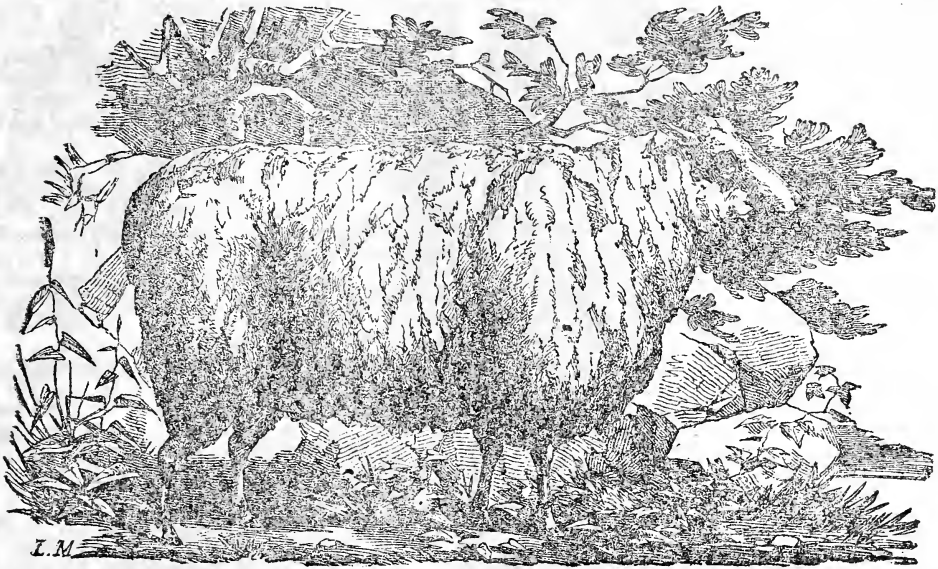
PROBABLE EFFECTS OF THE WAR ON AGRICULTURE.

A correspondent of the *Richmond Enquirer*, writing from Liverpool, on the war, says the spirit of the English is united in favor of the war, and that men and money will be voted for its continuance, by Parliament. He adds:

"Yet when drained of her men, when so many thousands now engaged in peaceful pursuits are taken away, and the labor of the country thus manifestly lessened, who, I pray, are to furnish meat and bread for these vast armies, and the population that yet remain at home? There is not a mouth less to feed, and many less left to produce the necessary food for all at home or abroad. Russia will send nothing from the Baltic, and the great wheat growing country on the Danube, and that which is watered by the many rivers entering the Black Sea, is ravaged by desolating war; and all that the people of that vast and rich country has for years sent abroad, and to England, especially, will find for its diminished production consumers at home. Already are these considerations pressing on the English wheat and flour market, and keep up the prices even after a good crop, which has been secured in most admirable condition. Wheat sells now at rather higher prices than it did one year ago, and our own country can now but insufficiently supply either England or France. But let our people make less tobacco and less cotton the next year and the year after, I tell you, and millions of wealth will be drawn hence to us, if for these now staple articles, corn, wheat and provisions be substituted. Clear up your lands, and put the utmost breadth of them in everything necessary for the food of man; and every particle that is produced will find an admirable market the next year. True, our wheat crop is already in the ground and its quantity cannot now be increased. But our corn crop may—and that is an article which will pay much better next year than either tobacco or cotton.

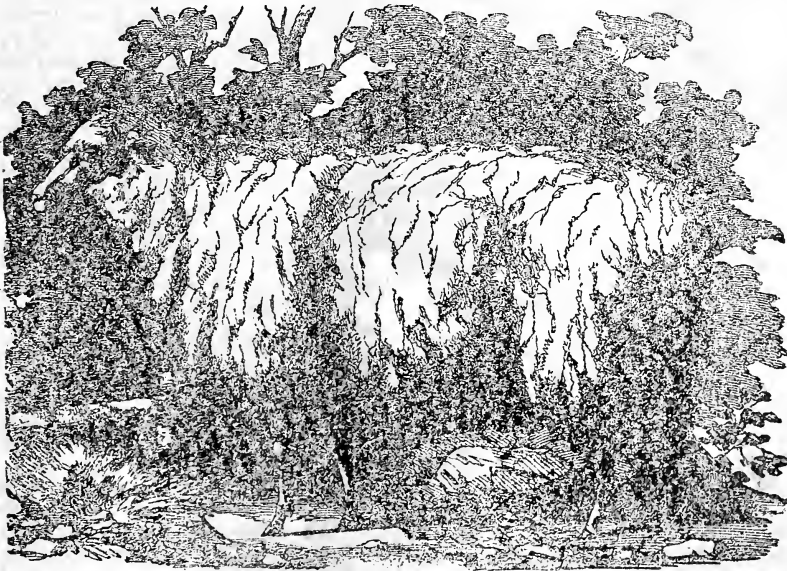
FISH PONDS.—On the farm of the late Gideon Lee, near Geneva, New York, is a fish pond of about two or three acres, nine feet deep, made by running an embankment across a small valley, and covering a marsh. Trees line it, water-grasses grow in it, and cattle are not allowed to disturb it. Some seven years ago, a dozen or two of trout were placed in it, since which time at least two thousand large and fine fish have been taken from it for the use of the family. A running stream prevents stagnancy.

LEICESTER SHEEP.



LEICESTER BUCK.

THE Long-Wooled Sheep comprehend, first, the pure New Leicester Breed; and, secondly, the varieties more or less intermixed with it in blood, of which the principal are: 1st, the larger class of Lincolnshire Sheep; 2d, the Romney Marsh Breed; 3d, the Cotswold Breed; 4th, the Devonshire Notts; 5th, the Long-Wooled Irish varieties. All these Sheep are of large size, are destitute of horns in both sexes, and bear long wool, unsuited for preparation by the card, but eminently fitted for preparation by the comb, and the manufacture of stuffs termed worsted. They are the kinds of sheep more especially adapted to the plains, and to districts where artificial food can be reared in the necessary quantity. They have been continually increasing in numbers with the extension of tillage and the general im-



LEICESTER EWE.

provement of agriculture. Of the several varieties, the New Leicester Breed occupies the first class with respect to form and the aptitude to fatten readily. The larger Lincolnshire, the Romney Marsh, the Cotswold, and the improved Devonshire breeds, have each properties which render their cultivation profitable under particular circumstances. The Irish varieties have not yet generally attained to the perfection at which the others have arrived.

LABOR, NORTH AND SOUTH.

An all-prevailing argument in favor of our reviled system of domestic servitude is to be found in the fact, that it has, thus far, been steadily and closely accompanied by thrift and prosperity in every department of home industry. In spite of the most oppressive injustice, in the form of unequal exactions, favoritism in the disbursement of revenue, &c., our half of the Union has gone on increasing in all the elements of wealth and greatness, until at length we stand, confessedly, a chosen people, upon whose exertions a benignant Providence has thought good to pour forth one continued stream of approval and remuneration. The blight and mildew which were to cover our "accursed section" as a pall, where now is it to be found? Let our agricultural advances, our factories, our institutions of learning, our churches and our railroads answer the question. Last, but not least, let the futile imputation, which that question would convey, be branded as it deserves by the notorious contrast, at this very time afforded, between the value and protection of labor North, and its value and protection South. From every Northern city of any consequence, we receive intelligence, almost daily, to the purport that the wages of labor are falling while provisions continue to rise. Such is also the case in many, if not all, of the manufacturing towns; and we may reasonably suppose these to be very fair exponents of the rural districts. In the city of New York, three thousand mechanics were thrown out of employment a few weeks since, all in a single Ward. Another statement is that there cannot be less than seventeen thousand able-bodied working men at this very time, in the great American Metropolis, as it is called, who neither have employment nor a prospect of it. The determination of employers to reduce the prices of compensation still lower, renders it next to impossible for those who have work to help those who have not. Rents, too, continue high, while the ability to meet them is thus growing daily less. The end of this is melancholy to contemplate. Rags and wretchedness, disease and crime, make up a fearful prospect for the unfortunate men and women who have the severe ordeal to undergo.

Now turn to the South. Go to New Orleans, Charleston, Savannah, Mobile, Richmond, Norfolk, Raleigh, Columbia, Augusta, Macon, Knoxville, Montgomery and Galveston. Go into every village within our borders. Search through the barrenest hills and ridges of our section. You will see nothing approximating to this condition of things anywhere. You will find a sleek, well-fed, warmly-clad, lightly-tasked negro population to do the bulk of our agricultural labor. That they are productive of wealth to their owners is not for a moment contradicted. It is this that keeps all right. But, in return, they are protected, from youth to old age, as a part of one's home and family. They are nursed in sickness, worked in health and preached to upon the Sabbath. The master's right arm is ever ready to be up-lifted in defence of his mal-treated slave. The slave knows this and feels it. He has that best ingredient of comfortable security, the assurance that he will ever be well cared for in life and decently interred in death. Hence his characteristic mirthfulness.

"From toil he wins his spirit light,
From busy day the quiet night;
Rich, from the very want of wealth,
In Heaven's best treasures, peace and health."

There is no class on earth, to whom these four lines of Gray are more correctly applicable, than to the Southern negro. But it is not alone in their own happy condition that we find much to congratulate ourselves upon here. The general prosperity of our section, based (as it undeniably is) upon our institution of African slavery, is al-

ways directly conducive to the well-being of mechanics and tradesmen of every kind amongst us. Because we have in this way an occasional superfluity of wealth as it were. We are not continually pinched and pinching. Most Southern farmers have at some one season of the year (generally about the time their cotton-bags begin to roll to market) fully distended old pocket-books, a little greasy looking at times perhaps, but none the worse for that. Their contents, put to work by a prompt and cheerful payment of the various bills and accounts liberally contracted with our merchants, lawyers, printers, carpenters, brick-layers, &c., is what enables every citizen in any Southern community yet heard of, to thrive and even grow rich with ordinary care.

From reflections like the foregoing we deduce a single proposition, which we hope to impress more fully upon our readers at another time, and it is this: That the institution of African slavery, as existent in the Southern States is blessed of Heaven to the well-being of all who use it aright, and especially to the ease, comfort and security of the poor white laborers of our section.—*Edgfield Advertiser*.

SOMETHING FOR COTTON PLANTERS.

WE have had on our table for some weeks, but we have been prevented from using it sooner by the pressure of other matter, a description in the *Nashville Farmer's Banner* of a new invention, called the "Cotton Leaf Cleaner and Boll Picker." The inventor has obtained a patent for it. He is a cotton planter of Alabama, and is said to be a gentleman of fine education and general information. He is making alterations in the machine, and will soon have his models ready for examination and trial. The object aimed at by him is to bring into use an instrument for picking cotton, and to improve its value by removing the leaf and dirt, and thus send it clean to the gin.

Speaking of this invention, a correspondent of the *Banner* says:

"It comes, a welcome ally, to aid the great army of cotton-pickers, whose labors are tedious and severe. It brings iron fingers and mule muscles to do the work now done by human fingers, and thus accomplishes in three days what now requires six. It can be worked by any power that will work a gin. A portable horse-power set up in the field will be convenient, and can be extensively used in October and November, when the seasons are dry. The cotton bolls are to be gathered with as little care as you would corn, and taken to the machine, either in the field or under shelter, as the case may be. Then the machine and the mules take out the bolls, leaf, dirt, and everything, and the cotton comes through the gin as middling to good middling in quality.


"Such a machine, to the cotton growers of the United States, is worth millions, provided it can be made to do what is intended by the inventor. The object to be accomplished is not without difficulties, and if the first machine, which will soon be presented to the public for inspection, makes an approach to the end aimed at, we may feel confident that the defects will soon be remedied by the genius of American talent, and that cotton will be picked by iron fingers instead of human, which will be equal to doubling the field force during the gathering of the crop.

"A planter who cultivates with fifty hands, may, by the aid of this machine, have what is equivalent to one hundred hands in gathering, and that without the expense of feeding them. He is thus enabled to save all that he can make, though he may cultivate the best bottom lands of Mississippi, Yazoo, Arkansas, or Old Caney. The hands can be kept out of the dew and their health preserved. More lands may be opened, and larger quantities cultivated, by driving two mules with sweeps and

harrows thirty-six inches wide. That is, on bottom lands, where the rows are five or six feet apart.

"In the cleaning process, a small per centage may be lost, but you save the loss occasioned by standing in the field till February, exposed to winds and rains; and also much of the loss in the spinning-room, which is now ten per cent. from dirt, dust, leaf, etc.

"We shall look with much interest to the operations of this invention. Should it prove successful, it may, in truth, be characterized as a machine which will mark a more important epoch in the progress of the growth and manufacture of the great Southern staple, than any invention since the construction of the gin.—*Jackson Mississippi-pian.*

 In answer to the inquiry of W. D. G., of Long-bridge, Ga., (Feb. number, page 56, *Southern Cultivator*) we give the following from one of our Northern exchanges:

PRATT'S DITCH DIGGER.

Mr. R. C. Pratt, of Canandaigua, New York, patented in July, 1853, a machine for digging ditches, which proved one of the best things exhibited at the late State Fair. By its aid, one man and two horses have frequently dug 150 rods of ditch three feet deep in one day, and from 50 to 150 (according to the nature of the soil) is considered a day's work. The machine consists substantially of a scoop and revolving wheel—the scoop scraping and the wheel carrying up the dirt until at a sufficient height it is tumbled out upon the sides, at a little distance from the ditch. Several repetitions of the operations are required before the ditch is sunk to sufficient depth.

The specimen exhibited at the late Fair was all wrought iron, and weighed between 700 and 800 pounds. The diameter of the main wheel was 5 feet, and the breadth of the diggers or lifters fixed thereon, and that of the scoop or curved channel in which they rise, is about 9 inches. Although the lifting apparatus is thus narrow, it is practicable, and indeed desirable, to make the small plows or cutters which pare the side cuts somewhat wider, so that a ditch of any width, from 9 to 15 inches may be excavated by the same machine.

The weight of the dirt which is being lifted, the curved channel, and in fact of the whole machine, rests on the diggers, which, like the floats of a paddle-wheel, project from the periphery of the main wheel. As the machine is drawn forward by the horses, the diggers are successfully forced into the earth, and compel the wheel to rotate—thus carrying up and discharging from the top, all the earth caught by the scoop, which is in immediate contact behind. On the extreme rear of the whole is adjusted two cutters or small plows, which pare the sides and tear the earth to a suitable distance below, ready for the next passage of the machine, so that after the first passage the diggers are always pressed down into the ground already loosened, to a depth of from two to ten inches, which loosening may be supposed to regulate the depth to which they will be likely to sink. The wheel and its accompaniments being of considerable weight, great muscular exertion would be required of the attendant to prevent its falling on one side, but for a simple and very effectual provision for its support. The stout iron shaft on which the main wheel freely revolves, is prolonged some two or three feet on each side and provided with a light carrying wheel mounted loose, as in a common carriage axle, to run upon the ground. These wheels are to maintain the upright position of this machine; but the weight must at all times, when in operation, be allowed to rest on the diggers. In short, the main wheel and the whole machine must be allowed to sink down into a ditch or rise to the surface, while the carrying wheels simply run lightly on the sur-

face at the sides. The end is accomplished by bending the axle into the form of a large crank at each side and releasing it from all connection with the machine, except that of passing loosely through the centre. A catch is provided by which the attendant (who is supposed to be grasping a pair of handles in the rear) may make the connection a fixed one at pleasure, and when desiring to leave the field and travel the road the weight may, by this means, be thrown entirely upon the carrying wheels.

COTTON—ITS VALUE AND IMPORTANCE.

We quote the following eloquent remarks from the late speech of Hon. A. H. STEPHENS, of Georgia, in reply to an onslaught upon the South, by one of the Representatives from Ohio:

"But, Mr. Chairman, my time is nearly out. There are many other matters, I did wish to allude to, which I must pass over and omit. I wanted to say something about the present condition of things in some of the Northern States, particularly in the City of New York, where it is now found that there is, after all, something in life worse than being required, or even made, to work. 'This is the great evil the negro in the South is subjected to, in the opinion of those who rail so much against our social system. But that greater evil which is now felt in New York is the want of work to do, by which means may be earned to keep from starving. 'Hunger is a sharp thorn' was, a few days ago, the banner motto borne by thousands in that great mercantile metropolis. Under our system, sir, we never have such scenes. We have, it is true, our afflictions of disease, and epidemics, and disasters of drouth, floods, and hurricanes; but the wail of thousands crying for bread, has never yet, under the blessings of Heaven, been heard in our land of sunshine and plenty, 'cursed,' though it be, with slavery! We have a 'Special Providence,' to use a late very appropriate designation given by the New York *Tribune*, which prevents all this. A system by which capital, accumulated in the years of plenty, is required to sustain labor in the years of want. These matters I wished to go somewhat into, but I cannot. But enough has been said to show a development, whether considered physically, morally, socially, or intellectually, quite sufficient to place Georgia (with domestic institutions as much abused as they are by those who know so little about them) fully along side of Ohio, 'the giant of the West,' or any other State of this Union. That was my proposition, and I think I have made it good.

"I want, in conclusion, however, to say a few things, Mr. Chairman, about one of our great staples. I omitted it in its proper place, but it will do, perhaps, just as well here. I mean the article of cotton; and I wish to say what I do on that subject, from the fact that I have seen it stated that the Ohio hay crop was equal to the Georgia cotton crop, and that the hay crop of the United States annually is quite equal in importance, as an agricultural product, to this great Southern, or, I should rather say, National staple. Those who thus think, or talk, or argue, take a very narrow, imperfect, and unphilosophical, as well as unstatesmanlike view of the subject. As to the mere money value of this article, or its excess in value over the other, it is not my purpose to speak; that—great as, in fact, it is—is a small matter, infinitely small when placed by the side of other larger and more comprehensive considerations of the question. Some things have values extrinsic as well as intrinsic. Cotton is eminently one of these. Gold and silver are not so much entitled to be placed on the list of such things as it is. The extrinsic value of these metals arises from their agency as the adopted representatives of all values. With their displacements, however, many substitutes could be obtained. But what substitute could be procured for the agency of cotton?

"Let us look, for a moment—and I have but a moment or two left—into some of the relations of the world. To illustrate, I will state simple facts. These facts are collected from the very able report I hold in my hand. It is Ex. Doc. No. 136, 1st sess. 32d Cong. Full credit, therefore, may be given to the facts. They come with the stamp of the highest authority. From the document it appears that the cotton crop of this country gives employment to at least 120,000 tons of inland steam tonnage, and 7,000 persons in transporting it to points for shipment. It gives employment to 50,000 American seamen, and 1,000,000 of American tonnage in its coastwise shipment. It gives employment to 800,000 tons of American shipping, and 40,000 American seamen in its foreign shipment. Twenty-five thousand other persons, at least, are engaged in receiving and shipping it. It gives employment to at least 100,000 operators in American factories, whose annual wages are over \$17,000,000. In these factories there are invested \$80,000,000 of American capital, which turn out, annually, at least \$70,000,000 worth of products! With these facts before him, the writer of the report uses this language. I ask the attention of the committee to it, because it is no less graphic than truthful:

"Every interest throughout the land—at the North and the South, in the East and the West, in the interior, and on the Pacific as well as the Atlantic coast—receives from it (cotton) active and material aid. It promotes, essentially, the agricultural interests in those States where cotton is not produced. It is the main source of the prosperity of the mechanic, the artisan, and other laboring classes, as well as that of the merchant, and manufacturer in every section of the Union. Every where it has laid, broad, and deep, and permanent, the foundations of the wealth and strength of the United States, and of their independence of foreign nations, even the most powerful, dependent on the United States of America. More than any other article, nay, more than all other agricultural products united, has cotton advanced the navigating and commercial interests of the Eastern Atlantic States, and of the whole Union. It, more than any other agricultural product, has cherished and sustained those interests, not merely by its direct contribution, but by awakening commerce in other countries, from which they have received profitable employment. Neither the whale fisheries, nor the mackerel and cod fisheries have been of the same importance and value to those interests as the annual cotton crop of the United States, since the war of 1812, has been for its transportation coastwise and exportation to foreign countries. Like the light and heat of the sun, the genial effects of this inestimable blessing which Providence has bestowed upon his favored people, reach every portion of the land. They extend to every city, and town, and village, and hamlet, and farmhouse—to the ship, to the steamboat, to the canal barge, and to the railroad."

"Yes, sir, throughout the length and breadth of this vast Confederation of States, there is not a tenement, whether cabin or palace, where the life-giving and life-sustaining influence of this Southern product is not felt and realized. And besides this, it may be added that the same article gives employment, and the means of supporting human life, to at least 3,000,000 of persons in Europe, and the investment of at least three hundred millions of their capital! Figures almost fail, sir, to calculate the extent of the influence of this article upon the comfort, the happiness and well-being of mankind. The one-sixth at least of all these results is due to that portion of this product contributed by Georgia. This sketch gives us but a slight glance at some of the extrinsic values of cotton, to which the money value, to the grower, great as it is, is but a drop in the ocean. But who, in the face of these facts and these grand results, can be bold enough to maintain that this product of the South, in value and importance

is to be put in the balance and weighed down by the hay crop of the North? Or, that the cotton crop of Georgia, that contributes one-sixth of all these results, is, in like manner, to be put in the scales against the hay crop of Ohio? The dried grass, the cow food, that sustains life for a season in their herds of cattle; though they were countless in number! The subjects hardly allow a contrast, much less a comparison; and whoever attempts it, does injustice, not only to his own intelligence as a statesman, if he has a spark of it about him, but he does gross injustice to one of the most important elements of his country's greatness! To adopt the figure of the author of the report I have just read from, we might much better compare the lard lamps, or wood fires, or whatever else lights up the dwellings of the nineteen hundred thousand inhabitants of that State every night to the full blaze of the 'glorious King of day' at noon shedding abroad not only light, but heat, animation, and life upon a smiling world around us."

THE WINE TRADE OF FRANCE—SOUTHERN VINEYARDS.

In further corroboration of the soundness of the views of our correspondent, "A. C.," (February number, page 44) we subjoin the following letter from Dr. GOODRICH, U. S. Consul at Lyons, France. It appeared in the *Merchant's Magazine* for February:

"The most productive wine districts of France are the South and Southwestern, and the least productive is the Northwestern. The vine grows not only on the level and undulating lands, but also on the hill-sides and mountain summits. These lands are mostly stony, sandy and sterile, worn out and unfit for wheat growing. During the last three or four years, a destructive disease has attacked the vine, not only in France but in Italy, Spain and Portugal. This malady is of a fungoid character, and its preventive or remedy has hitherto eluded the vigilance and researches of the chemist and naturalist.

In the statistics I shall give you—and they will be official—I will for brevity avoid the smallest numerals, as my object can be attained without them. The number of acres of land under vine culture in France differs but little from 5,000,000. There are about 2,000,000 of persons (mostly females) employed in the cultivation of the vine and the manufacture of wine, exclusive of 250,000 engaged in the transportation and sale of wine. The annual average product is a little more than 800,000,000 gallons—for obvious reasons I give you American rather than French terms. The domestic or home value varies, of course, with the supply and demand, say from ten to twenty cts. a gallon. For the last two years, owing to the "disease," the price has augmented from one to two hundred per cent. on former prices. The annual value may be set down in round numbers at \$100,000,000.

In the year 1849, which is probably the best in several years, the number of acres under cultivation was 5,500,000, producing 925,000,000 gallons of wine. This was an increase of 115,000,000 over that of the last decade, 1839. Nearly 50,000,000 gallons are annually exported as French wines. In 1849, 41,000,000 were exported; in 1850, 42,000,000; in 1851, 49,500,000; in 1852, 53,200,000; in 1853, 43,500,000. Ninety millions of gallons are annually distilled into brandy, although for the ensuing year, owing to Government restrictions, there will be but little French brandy exported to the United States except that made from American whiskey imported into France. One-seventh, or about 133,000,000 gallons of wine, are annually exported from France either as wine or its distillations. The duty on wine and its products paid into the French Exchequer during the past year was \$22,800,000.

This includes the ordinary excise, as also the "Octroi," or city duty. There are by estimate, 220,000,000 gallons of wine manufactured into spirits, exclusive of the 90,000,000 made into brandy. This leaves more than 700,000,000 gallons of wine for home consumption, or about twenty-one gallons for each inhabitant for the year.

Wine, as a beverage, is universally used here by all classes. The stronger liquors are chiefly for exportation; hence, you see but very little drunkenness in *la belle France*.

The disease of the vine in France has for the last two years been very destructive, and it has greatly diminished the production of wine. This is on the increase, and fears are entertained that it may totally destroy the vine. Under this apprehension, may not the subject of vine culture legitimately and appropriately attract the attention of our Southern and Southwestern planters? Many of our Southern lands; I opine, are peculiarly adapted to the vine, and from natural sterility or other causes are unsuited to products requiring richer and stronger soils. The lands of Southern Europe employed by the vine are light and sterile, unsuited to wheat and other grains.

PISCICULTURE—FISH BREEDING.

THE New York correspondent of the *Charleston Mercury* ("LORRIS") gives us the following sketch of a very useful little volume which may be obtained per mail from Wm. N. WHITE, Esq., Athens, Ga. We have perused it with much interest, and would commend it to the attention of all who desire information upon the subject of which it treats:

"The other volume to which I invite your attention, is one which should especially attract the notice of your wealthy planters, who have fine estates, susceptible of improvement. It is from the press of the Appletons, also. This is *A Complete Treatise on Artificial Fish-Breeding*. It is partly a translation from the French, in which country they have carried this art to great perfection. It includes the Reports on the subject, made to the French Academy and the French Government, and reports the particulars of the discovery, and the progress which has taken place in England, also, in respect to the artificial breeding of fish. With these reports, it combines an admirable manual, in which you learn all the processes—are shown your way, step by step, in the prosecution of an art which is delicate, but not difficult; and, though seemingly of much intricacy, is, in fact, exceedingly simple; requiring nothing more than care, cleanliness, and dexterity. It is really a beautiful art, which I could wish that some of your practical naturalists, (who better than Prof. Holmes, of your Charleston College, who is a born naturalist, and loves his labors?) would teach, as an aside, to your planting gentry. Really, I am serious in desiring that you should make all your planters, having leisure and large estates, familiar with his beautiful practice, in which Art proves herself, emphatically, to be the handmaid of Nature. To him who knows what your lordly old estates were, along the banks of the Ashley, the Cooper, the Ashpoco, &c.,—who knows what their tastes and refinements were; who can, even now, penetrate the thickets and show the ancient artificial fisheries; who knows what wonderful *natural preserves* there are, all along the swamp-girdled rivers of Carolina; who feels that every *fish-hole* in the swamps may be converted into a treasury and nursery; who knows that the luxuries, comforts, profits, of a plantation—such as a gentleman would care to own—would be multiplied indefinitely, by the artificial breeding of fish so as to form an inexhaustible supply; who knows also, that our planters have a sufficient leisure, and great passion for out-door exercises, in the fields and along the

rivers—with gun and fishing-rod; and who believes that they are beginning to awaken, and be watchful of all improvements; to him who knows all this, it seems that a study like the one which this book unfolds, would be of inestimable value. I suppose that Holbrook, Holmes, Bachman, and others among you—Porcher and Ravenel—have already looked somewhat into the matter; but I could wish to see them egging their neighbors on, and showing the planters how the thing may and ought to be done. There may be larger *foreign* books on the subject, but this before me seems an excellent manual, made as clear as possible, and which will suffice to open the way. I should rejoice, next spring, to visit William Elliott—the Devil-King—and look into his artificial fish-pond!"

WHY THE FARMER SHOULD GIVE HEED TO THE MAN OF SCIENCE.

THE following judicious remarks form the conclusion of an able lecture by Prof. Tuomey, upon chemistry as applied to agriculture:

In conclusion, allow me to say one word upon the apparent indifference with which agriculturists, as a body, listen to the teachings of science.

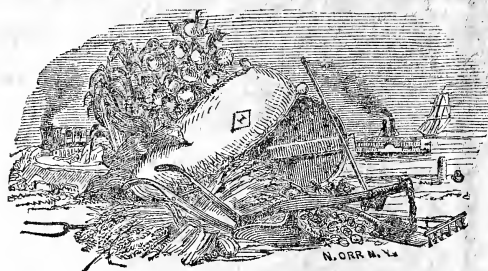
Rural pursuits are far less favorable to speculative states of mind than those of the manufacturer, and hence whilst the latter has pressed chemistry into his service, the cultivator of the soil is too often contented to pursue his own chance-directed processes unaided by the light of science.

This unnatural divorcement of science and agriculture has often arisen from not distinguishing between agriculture as a *science* and agriculture as an *art*. The man of science investigates one department, and the cultivator of the soil practices the other. Odium is often brought upon what is called scientific farming by the failure of men of science when they attempt the practice of agriculture. Now, I believe that, in general, it will be found that it was not the science but the common sense of such men that was at fault. The practice requires a different training, and however sound his principles, the mere man of science fails for want of it when he attempts to try his own principles practically. Liebig, I apprehend, would make but a sorry plowman, yet the world has listened to his teachings. In all the arts of civilization this division of labor is recognized. The anatomist points out, from his knowledge, of the hoof, the best mode of shoeing horses, but no one would think of employing him to put his own principles in practice. The chemist informs the tanner of those substances that contain the largest amount of tannin, and explains the rationale of all his processes, yet the chemist is rarely expected to be able to produce leather from the raw hide, nor is the utility of knowledge called in question on this account.

Now, let this but be properly understood amongst us, and there will be an end to the sneers at "book-farming," nor shall there be any longer cause to complain of the proverbial tardiness with which practical agriculturists avail themselves of the discoveries of chemical science.

It only remains for me, in conclusion, gentlemen, to bid you God-speed in the great work that you have commenced, of constructing for the South a Southern system of agriculture; everything around you calls for it—your climate, not less than your staple productions, calls for it. You can scarcely apply to your soils the experience of any other country. You must conduct experimental researches for yourselves, and upon those, guided by the willing hand of science, you may erect a system that will elevate the agriculture of our country to the position that nature has plainly indicated the South should occupy.

✍ Always take one or more agricultural papers, for every number will give you information which will benefit you in dollars.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 3..... MARCH, 1855.

ANSWERS TO INQUIRIES, &C.

F. C. R. B., Florence, Ala.—Your request was complied with, per mail, on the 9th of February.

W. G. D., Oakland, Ala.—Replied to yours of the 29th of January, per mail.

W. L. R., Emory, Miss.—The work you desire will be sent you per mail for 87 cents, by addressing FOWLERS & WELLS, New York City. We have only one copy, for our own library.

J. A. G., P. M., Sharon, Tenn.—R. L. ALLEN, 189 Water street, New York City, can furnish the Italian Rye Grass Seed, we suppose. It is a very valuable variety for some sections, but has not been extensively tested in this neighborhood, or by ourselves.

S. R. C., Nashville, Tenn.—An experienced planting friend speaks very highly of Bullock's Press for packing cotton. An account of your "Cotton Picker" will be found in present number, under the head of "Something for Cotton Planters." We have instituted an inquiry for the manufacturer of "Randall's Cotton Planter." Strange! that men who depend on the planting community for their support should be ignorant of the advantages of properly advertising their wares through the agricultural press. We have had various inquiries for this and other newly-introduced machines and implements, but we are often unable to give satisfactory responses to our querists. We truly wish you success in your important enterprise. Keep us advised of its progressive improvement.

H. J. A., Woodville, Tenn.—See answer to J. A. G., P. M., above.

J. C. W., Perry's Bridge, La.—Address B. V. IVERSON, Columbus, Ga., for "Rescue Grass" seed, and see his article in present number. Can send you Peas per mail, but cannot obtain the Corn you desire.

J. R. S., Clarksville, Ga.—Your communication reached us too late for the present, but will appear in our next number, divested in a slight degree of its pungent personality. We shall be obliged for the hints to which you allude, in your private note to the publisher. We fully agree with you in regard to the size of the type; which, by the way, is "Brevier on Bourgeois body." "Long Primer" would be more to our taste, with "lead-ed Brevier", for the editorials, &c.

J. C. R., Prattville, Ala.—Your corn is certainly valuable, if it will, in the hands of others, do as well as with you. We shall be obliged to you for the sample you speak of, for experiment. It may be safely sent per mail.

A. T. R., Vicksburg, Miss.—We consider the Brahma Pootras, the Dorkings and the Games all desirable. The Dorkings are somewhat deficient in constitution, but when crossed with the Game, Brahma or Shanghai (of medium size and fine form) they produce a very superior

fowl for the table. We do not know of but 2 or 3 pairs of really superior Dorkings in Georgia, and these are not for sale. Address FRANCIS ROTCH, Esq., Morris, Otsego Co., New York. See an excellent article on Poultry, (from the *American Horticulturist*) in our present number.

J. D., Zero, Miss.—We will supply all the Strawberry Plants you may desire in the fall of 1855. At present, the kinds you name are scarce and difficult to procure.

S. D., P. M., Kosciusko, Miss.—The foregoing will also serve as a reply to your friend, Mr. JENNINGS. It would be useless to send him seed of the Strawberry, even if we had it; as it "sports" very wildly; or, in other words, does not reproduce itself truly. Will obtain plants for him next fall. It is now getting too late to ship them to a distance for transplanting.

J. M. B., Coletto, Texas.—You allude to the "Battay Potato." It is planted here in June or July, ripens in the fall, and will keep good again until planting time, or longer. J. A. ANSLEY, of this city, may be able to supply a small quantity for seed. We do not know any early Potato of good keeping quality.

J. H. R., of "Apple Grove," Ala., desires particular information in regard to the "best method of stabling, lotting, feeding and grazing" a fine young "Jack," he has recently purchased. Will some of our experienced mule-raisers come to his aid in this matter?

T. H. Washington, Ark.—The name of your grass is entirely new to us. Can you oblige us with a few the seeds, per mail?

S. H. G., Prattville, Ala.—The book you desire may be obtained from JOHN P. JEWETT & Co., Boston, Mass., for \$1 or \$1.25. We can send you a package of seed, post paid, at \$1.

Mrs. C. S., Columbus, Ga.—Miner's "American Bee-Keeper's Manual" is a good work. It may be obtained here, or perhaps at the bookstores in your city. Address V. LA TASTE, Esq., of this place, for information on Bees, Bee Hives, &c.

F. E. T., Springfield, Ga.—We do not know of a work exclusively devoted to Sugar making. If any of our subscribers have such an one, they will oblige us by giving its title, price, &c., and informing us where it may be obtained.

F. M., Marlin, Falls Co., Texas.—If you will specify the particular book you desire we will send it to you. You can probably procure Holmes' "Southern Gardener" in New Orleans—also Affleck's "Rural Almanac," an excellent little annual, may be obtained from B. M. NORMAN, of the same city.

J. H. W., Leake's Store, Ark.—We sent you per mail the pamphlet you desired; but cannot supply the missing number. We will inquire in regard to the Mulberry.

J. W. B., Woodville, Miss.—Your letter was duly received, but the two gold dollars dropped out *en route* or were abstracted. In enclosing this slippery little coin, the best way is to *paste* a thin strip of paper entirely over it. Wafers crack and peel off, and are very uncertain. We send you the *Cultivator*, thus sharing the loss. The "*Horticulturist*" is a distinct concern; and, of course, we cannot be expected to pay out for it, money which we have never received.

M. B. C., Vicksburg.—It is possible that you might succeed with the Cranberry on the moist land you speak of. The trial we gave the plant was scarcely a fair one, on account of late planting and the extremely dry season that followed.

D. B.—The Yucca, or "Spanish Bayonet," properly trained would make a most formidable hedge. It may be propagated by seed, suckers, or pieces of the stem. Try it, by all means.

H. L.—It is said that if a small portion of *Gas Tar*, (which may be obtained in all our large cities) sprinkled through the manure or compost used for *Corn* it will prevent the attacks of the *Wire Worm*. The experiment can be cheaply made.

J. W. M.—The vegetable you allude to is undoubtedly

ly the *Dioscorea Japonica*. It is, we believe, from China; and a few specimens have been brought to this country, to be tried as a substitute for the Irish Potato, which, of late, has rotted badly in many sections. A French paper (*Galignani*) gives us the following account of it:—"This plant, says the writer of a paper sent to the Central Agricultural Society, may, by its size, weight and hardy character, become exceedingly valuable in France, as it will serve as a substitute for the potato. Its tubers, like those of the Jerusalem Artichoke, resist in the open air the severest winter, without sustaining any injury. Several specimens of these roots, of very large size, were presented in 1852 to the Society, one of which, of cylindrical form, was three feet in length; another presented in 1853, weighed three pounds; the former having been in earth 20 months, and the latter 16. The flavor of this vegetable is more delicate than that of the potato."

L. T. P., Milledgeville, Ga.—See advertisements of Madagascar Rabbits in present number. They are worth from \$10 to \$15 per pair—the former price for fair young specimens of 4 to 6 months old.

W. B. J. Mount Comfort, Tenn.—You can obtain a Clover Seed Huller or Cleaner, from E. WHITMAN & Co., of Baltimore, Md. It is hard to say which is the "best Mower and Reaper combined." "Atkins' Automaton Self-Raker" would be our first choice; but Allen's, Manny's, Ketchum's, Hussey's and McCormick's are all highly spoken of. We have not sufficient knowledge of their relative merits, to decide for you.

THE NEXT FAIR—THE PREMIUM LIST.

The remainder of the Premium List did not reach us in time for present number, but will appear in our next. The location of the Fair is not yet settled; it now stands between Atlanta and Macon, with, perhaps the strongest leaning toward the former city. The Executive Committee will meet here on the 6th of this month, for the purpose of definitely arranging this and other matters. Should anything worthy of note transpire at the meeting, it shall be made known in our April number.

MULBERRIES FOR HOGS.

"A SUBSCRIBER" wishes to obtain some information in regard to the "HICKS MULBERRY," of which much has been said in former volumes of this journal. Any of our readers who possess the *genuine continuous bearing* variety, will confer a favor by furnishing us a plain and truthful statement of its merits, for publication; or, if averse to appearing in print, they may address the Editors privately. If the "Hicks Mulberry" is really as valuable as some aver, no time should be lost in disseminating it more widely throughout the country. We hope those who possess a familiar knowledge of it, will promptly respond to "A SUBSCRIBER's" (and our own) call for information.

THE HORTICULTURIST.—The club of subscribers to this valuable monthly, are informed that our February list was kept open until a few days since, when it was sent on to the publisher. The back numbers will be soon forthcoming, and regularly forwarded hereafter. We make this brief explanation in answer to several letters of inquiry.

P. BARRY, Esq., the practical and tasteful editor of "The Horticulturist," of Rochester, N. Y., will accept our thanks for a copy of the "Proceedings of the Third Session of the American Pomological Society," held in Boston on the 13th, 14th and 15th of September, 1854.

The "JOURNAL OF AGRICULTURE" is the title of a new monthly of 32 pages, just started at Washington City, by J. D. B. DeBow. Terms—\$1 per annum in advance.

RANDALL'S COTTON PLANTER.—If the patentee or manufacturer of this implement will address S. R. COCKRILL, Esq., Nashville, Tenn., he may "hear of something to his advantage." Can any person tell us anything respecting the merits of this "Planter," its cost, or where it may be obtained?

"ARTHUR'S HOME MAGAZINE is, in all respects, one of our very best literary exchanges. It is what its name imports, a "Home Magazine," well calculated to instruct and amuse both the young and old members of the family circle. Terms—\$2 per year, in advance. Specimen numbers sent free. Address, T. S. ARTHUR & Co., 107 Walnut street, Philadelphia.

HIGH PRICES FOR NEGROES.—The Columbia (S. C.) Times of the 2d of January, says; The stringency of the money market, and the cry of "hard times," does not appear to have had any effect upon the value of negroes. Messrs. March & Sharp sold a lot yesterday at the following prices.

2 old negroes, of 80 years of age, each....	\$285
1 old man, of 80 years of age.....	100
1 old man, of 100 years of age.....	41
1 old woman, of 90 years of age.....	115
1 woman, 25 years of age, and 5 children..	1,950
1 fellow, 28 years of age.....	700
1 fellow, 17 years of age.....	870
1 woman, 28 years of age, and 2 children..	810
1 girl, 13 years of age.....	510
A man, 26; a woman, 23, and an infant..	1,750
1 fellow, 20 years old.....	970
1 fellow, 18 years old.....	1,020
1 woman and child.....	735
A man, wife and two children.....	1,515
1 fellow, 20 years.....	1,050
Woman and three children.....	1,120

Others were sold at prices ranging from \$575 to \$815.

BREAD.—Wheat divested of all its bran does not contain enough of the health-giving ingredients, particularly of phosphate of lime, to satisfy the demands of nature.

Bread should be more thoroughly baked than it is usually, and not eaten warm from the oven.

Dry bread should never be thrown away. By soaking and re-converting it into dough, it can be again baked into excellent bread. It is of such materials that the delicious tea rusk are made. Bread of fine flour is too much eaten.

We recommend farmers to have their wheat ground more coarsely, and only take out a portion of the bran. They may also add corn or rye meal, with advantage to economy and health. It will be also economical in the country to add potatoes.

CHILDREN—EATING AND SLEEPING.—A well informed medical writer says that immediately after eating, if children incline to sleep, they should be indulged in that propensity. The stomach makes large demands on the circulation of the blood for the purposes of digestion; and as it and the brain are like two mills on one stream; when the one is engaged to the full extent, the other must suspend its operations. Very much of the dyspepsia and bowel complaints that prevail among business men is attributable to the violation of this law. After eating a full dinner they keep the brain at work, and let the stomach take care of itself. At evening new matters are added to the half digested contents, and if a turn of cholera morbus does not clean out the offending matter, they may accumulate to a bilious colic or pass gradually away, making a dyspepsia.

ANALYSIS OF WATER, &C.

MESSRS. EDITORS—I have, until now, neglected to send on my dollar, but, I suppose, "better late than never," and, in the language of one of your contributors, I am glad you have adopted the rule of "no dollar no *Cultivator*;" so enclosed please find one dollar for the *Cultivator*.

Enclosed I send to Dr. LEE (knowing him to be a good chemist) the analysis of a well of water on my place, forming a fine bold stream. I respectfully ask your opinion of it, and for what diseases you think it would be good.

ANALYSIS.

Temperature, 60 4-5 degrees—specific gravity, 138¹⁰⁰—reaction decidedly acid.

1. Carbonic Acid.
2. Free Sulphuric Acid.
3. Proto. Sulphate Iron.
4. Sulphate Lime.
5. Chloride Magnesium.
6. Sulphate Alumina.
7. Iodide Potassium.

By complying with the above you will greatly oblige a friend and subscriber. W. L. R.

REMARKS.—Were the quantity of carbonic and free sulphuric acids given, and that of the Iodide of Potassium, in a pint or quart of water, we could judge better of its medicinal virtues. Iodine is a powerful medicine, and is used to remove obstructions in glands, and cure other chronic affections. Regarded as a whole, the water is a tonic—its free acids will tend to prevent all biliary concretions, and its iron be, perhaps, of some service. Sulphate of lime or gypsum, we regard as unwholesome, if taken in quantities into the stomach. It prevails to an injurious extent in many limestone regions; and to avoid it, we have long used filtered rain-water for making tea and coffee. L.

SMALL HOGS FOR THE SOUTH.

THE attentive readers of this journal must have noticed a very sensible article under the above heading on page 19 of the January (1855) number, from the pen of "C. L.," Minden, La., which concludes by desiring the opinion of the conductors of the *Cultivator* on the subject. It is one deserving of consideration; and as the writer has recently purchased some six hundred acres of land near Athens, partly for experiments in stock-growing, sheep and dairy husbandry, he is anxious to collect the best judgment and opinions of Southern men in reference to size, kinds and varieties of different races of Live Stock. Free and friendly discussion will doubtless bring out the results of years of valuable experience in this department of rural industry; and from this record of actual practice with the peculiar soils, plants, climates and domesticated animals of the Southern States, much useful instruction may be derived for the benefit of all reading farmers.

In regard to a small breed of hogs in preference to a large one, our views coincide with those of "C. L.," and mainly for similar reasons. We have had but little experience in curing meat at the South, but that little has served to convince us that it is a more difficult operation than at the North. In cutting up a small hog that weighed a little over 200 pounds in January, when it was warm enough for the large blowing flies to be on the wing buzzing about, anxious to lay their eggs, we were thankful that the hams and shoulder pieces were no thicker, for when very thick, as they are in large, well fattened animals, they are extremely liable to taint near the central bones. As we pickle all the flesh of hogs, neat cattle and sheep, not eaten fresh, our practice is not to cut in over-large pieces, but to give the dry salt first, and the brine that soon follows a fair opportunity to penetrate to the centre of every piece. We never saw finer pickled pork

at the North than we now have at our first trial in Georgia. While smoke, or pyroligneous acid, is a powerful antiseptic, and preservative of meat, it is also nearly equally resistive of those changes in the stomach which constitute digestion; and on that account smoked hams, shoulders and sides of hogs are less digestible than they would be if not smoked. Excessive smoking should be avoided; a little is nearly or quite harmless to most stomachs.

On all thin lands where food for swine is scarce, a small breed of hogs should be preferred, because two small hogs will pick up a comfortable subsistence where one large one would nearly starve. The two small animals having eight legs to carry them over nearly barren old fields, and forests to hunt their living, while the one large animal has but four, it is obvious that the former can gather twice as much food in a day as the latter, and at the same time each small animal needs only about half the quantity to serve the natural wants of his little body. Domestic animals require daily nutriment in proportion to their weight; and it is on this principle that nature kindly diminishes the size by stunting them, of all young animals where their proper aliment is scarce. She wisely attempts to accommodate the volume and wants of their bodies to the circumstances which surround them.

On our very poor land, we had rather keep two small horses than one large one; and we shall act on the same rule in the purchase of working steers, milk-cows, and sheep for producing wool and mutton. Had we 600 acres of rich land, our practice would be different; for large animals have their advantages as well as small ones. These advantages, however, are a little over-estimated by BOUSSINGAULT, and some English breeders, although fashion in France and England favors mammoth horses, cattle, sheep and swine. Small animals are said to waste a little more food in respiration according to their weight, than large ones, on the principle that a pound of lead run into 16 ounce balls would cool sooner than if run into one large ball. In the former case, the surface for the radiation of heat is many times larger than in the latter; so the skins of three cows that will weigh 2,000 pounds have a larger surface than that of an ox that weighs as much as the three cows. BOUSSINGAULT asserts, and doubtless truly, that large animals are cheapest kept when soiled or stall-fed, according to weight. In a warm, quiet pen, or stable, the loss of food from action, or walking (which quickens respiration, and consumes both fat and muscles) is reduced to its minimum. In the Southern States soiling and stabling common stock are little practiced; and most animals are left to seek their means of subsistence where little is to be found.

Having decided in favor of small races, our next care should be to keep no larger number of hogs, cattle, mules, sheep or poultry than we can maintain in a growing, or in a fattening condition. This is a point in animal physiology and farm economy of great importance. We do not say that the rule never has an exception; for such rules are scarce. But the miserable economy of having vastly more mouths to feed than food to supply them, meets us in our every-day walks and rides. It were better economy to kill half the live stock in the State at once; make their carcasses into rich manure, and with this raise plants to feed and fatten the moiety that was kept for future service. Dead animals make excellent manure; and in the interior where Peruvian guano is worth from sixty to seventy dollars a ton, mean cattle might be put to a worse use than to be fed to hungry agricultural plants. The feeding of the latter on poor land, at a profitable rate, is a hard problem to solve; and where one has no corn for his hogs, and they are too poor for meat, why may he not reduce their number by feeding a part to young and needy corn plants? They have as good a right to eat hogs, as hogs have to eat corn.

All that we contend for is the maintaining of the true balance between the plants and animals kept, reared and improved, (not deteriorated) on a farm. One may have too few animals for the highest profit, as well as too many. Extremes in either direction are to be avoided; while the unknown latent resources of the soil are to be studied with all possible care. These may happily enable us to grow, and bring, to full maturity, far more of our most profitable crops. The subsoil may have hidden treasures in store for us, and for our live stock that will make both rejoice in the fatness of the land. Well directed industry and sound economy rarely fail to receive a liberal reward, even where the soil is not of the most promising character. By cherishing moderate expectations, and working up to the line of duty in the management of all kinds of stock—in saving their manure and producing feed for them—few will be disappointed. L.

DAVY'S DEVON HERD BOOK.—The second volume of this work is just published, and now ready for distribution at the New York State Agricultural Rooms, Albany. By enclosing R. P. JOHNSON (Corresponding Secretary) \$1.50, he will forward the book to any address desired. The liberality in registering animals of American breeders, giving them equal advantages with those of the location where the breed originated, deserves the good feeling and patronage of this country.

WHEN AND HOW TO SOW CLOVER SEED.

MESSRS. EDITORS—I see you recommend Red Clover to be used at the South. I am particularly fond of raising stock and wish to have the best pastures I can procure. You say Red Clover grows well in South Alabama; I am anxious to try it on my farm. I wish the information as to the best time of the year to sow the Clover seeds, and how to prepare the ground? Whether to sow it with Oats or Rye? or whether to put anything on the ground but the Clover seed at the time the seed is sown or the same season? Very respectfully yours, &c.,
Oakley, La., 1855. C. LEWIS.

In the Northern wheat-growing districts, clover is generally sown in March on snow and before the frost is out of the ground, and upon land seeded with wheat in September. The snow enables one to scatter clean fine clover seed more evenly over the whole surface than can be done without it as a guide. As the snow melts and the frost leaves the ground, the seed sinks into the moist earth, soon germinates, and gives an even stand of young plants.

At the South, we should sow clover seed either in December, January or February, preferring the first named month, upon land rich enough to bring a good crop of wheat, that had been recently plowed and harrowed. For covering clover seed, and all grass seeds, we prefer a bush, or light tree-top to any other means; and mainly because it covers none of the seed too deeply, and leaves little or none naked, and at the same time the surface is smoother than it would have been had the seed been covered with a harrow or plow. As a general rule it is best to roll the ground after the seed is bushed in or harrowed in.

We doubt whether it is wise to sow rye, wheat, oats or barley with clover seed with a view to protect the young plants from a Southern sun; and we would prefer to try clover seed alone. On comparatively poor land, there is danger of robbing the soil of its fertility by the growing cereals, to the serious injury of clover; and if the latter can endure the climate at all, give its deep tap-root rich earth in which to grow, and the plant will need no other plant to shelter it. According to our experience, step-mother plants are bad nurses; they consume more

nutriment than they pay for in shade, or any other benefit to the main crop.

From eight to twelve pounds of clean clover seed are usually sown upon an acre; when sown in chaff (as is done by most men who raise their seed) each farmer is governed by his judgment as to the quantity to be given to any given area. It is better to put on too much seed than too little, for the excess does no harm. L.

DURHAM AND DEVON CATTLE, SHEEP, SWINE, &c.—See advertisement of L. G. MORRIS, Esq., in present number. Mr. M. is one of our most reliable breeders and importers of fine stock, and those who send him orders can depend upon having them satisfactorily filled.

OSAGE ORANGE HEDGES.

MESSRS. MCGREW, LEAS & Co., of Dayton, Ohio, give us the following directions for propagating, planting and training Osage Orange Hedge Plants. We have been quite successful in sprouting the seed as follows: enclose it in a strong cotton bag of open texture, and soak it five or six days in running water; then mix with sand, and manage as directed below. We lost great quantities of seed by attempting to soak it in warm water, and never succeeded till we tried Mr. PITKIN's plan of steeping several days in a running stream. The proper time to do this is from the 20th of February to the 1st of April (in the South.) In other respects the subjoined directions are judicious and practical:

DIRECTIONS TO GROW PLANTS—SETTING AND MATURING THE FENCE.

Soak the seed in warm water from 36 to 40 hours, mix it with an equal quantity of clean sand; put it into a shallow box not more than 4 or 5 inches deep; keep it in a warm place and wet it two or three times a day, stirring it up well each time. Thus attended, it will sprout in 10 or 15 days. The ground should be new, fertile, and as free as possible from weeds; deeply and thoroughly cultivated, it may then be planted in rows of from one to two feet wide, at the rate of one quart to 3 or 4 square rods, it should be covered from one to two inches deep. They must be kept clear of grass and weeds, and be well cultivated during the summer.

SETTING THE PLANTS IN HEDGE ROW.

The ground should be thoroughly broken up, to the depth of 12 or 14 inches, and from 8 to 10 feet wide, well prepared. It is then necessary to stake off the row, and draw a line to work by. The hole for inserting the plants should be made with a steel dibble of proper size. Plants to be set 6 to 8 inches in the single line, and well put in; the soil on both sides of the hedge wants thorough cultivation each season until a fence is matured. No stock should be allowed in the enclosure when the hedge is set, until after harvest, and it is better to have none in until fall. The next spring it must be cut off just above the surface of the ground. If a vigorous growth is obtained by the last of June it may then be cut within 4 inches of the first cutting, if not the second should be deferred until the spring, thereafter twice a year, in the spring and mid-summer, each cutting to be from 4 to 6 inches above the former. The cutting should be simply square off, letting the side branches grow until a height of 12 to 15 inches is obtained, after which it should be rounded, so as to have a fence, when matured, 4 or 5 feet wide at the base.

Be admonished that a stitch in time saves nine, for the laying up one rail or nailing one board may save the ninth repetition and unruly stock.

DISEASED MEAT.

MESSRS. EDITORS—In killing my hogs I found that the meat of two, that were to all appearances just as healthy, hearty and thrifty as the others, were full (4 or 5 to every inch) of small globules, not exactly round, but inclined to be long. The outside of these globules was a very thin skin, containing water, in the centre was a white substance like *matter* or *pus*; there was nothing offensive in it at all. The meat was much softer and more flabby than that of the other hogs. The heart and liver of these two hogs, in fact all the meat, heads shoulders, sides and hams, were full of it. I would be glad to have this phenomenon explained, as it is entirely new to me.

Yours truly,

WM. H. RAY.

Greenville, Ala., 1855.

REMARKS.—The only explanation of which the singular case admits, is the fact that the cellular tissues of the animals were generally diseased, and the inflammatory action took the form above indicated. Hogs are not very subject to maladies, especially in the few first years of their existence; and they are seldom allowed to live long enough to suffer from the ills incident to old age, and a worn out constitution. The sudden transition from low feeding to high feeding sometimes vitiates the blood, and causes a morbid action in the cellular system not unlike the cases described. Less nutritious food, and that containing a little acidity, like sour milk, or fermenting slops, will operate as a preventive of such complaints. L.

FEEDING SHEEP ON COTTON SEED.

MESSRS. EDITORS—Experience and observation has prepared me to believe that sheep which are fed on cotton seed are more subject to the rot and other diseases than when fed on other food. For the last eight years my sheep were wintered entirely on cotton seed, during the most of that time they were affected with a most distressing cough and running at the nose, which foretold their condition; and after they were turned to grass in the spring, running at large, they continued to cough and run at the nose, and when the weather became warm, would sicken and die in large numbers. This season I have fed entirely on fodder and oat straw, which they eat kindly, and in keeping them in this way I find they are now healthy and sound, free from cough and as clean about the nose as a goat.

Now, Messrs. Editors, if cotton seed feed produces the above stated facts, cannot some of your numerous correspondents, or Dr. LEE, enlighten the readers of the *Cultivator* on the subject.

I am, with respect, yours, &c.,

AARON W. GRIER.

Raytown, Ga., Feb., 1855.

THE BOT QUESTION, AGAIN!

MESSRS. EDITORS—From some cause or other the September (1854) number of the *Cultivator*, containing the piece of "W. P. W." upon the subject heading this article did not reach me until I had read the reply of "A. T. L." in the November number. Although you are crowded, (as I learn from the contents of the *Cultivator*), with contributions from your numerous correspondents, still I hope you will find room to insert a short article by way of reply, especially as it was my article which called forth the lengthy reply of "W. P. W."

Whatever be the opinion of my unknown friend, "A. T. L." as to the cause inducing "W. P. W." to write, whether for reputation or to advance the cause of truth, my opinion is, it is a very well written production; calculated to deceive those who have not been eye witnesses of the plain matter of fact, that Bots do kill horses. I am free to ad-

mit I have not gone into an analytical or microscopical examination of the subject, and if I were to do so I would be incompetent to determine whether the stomach of the grub was capable of digesting chyle or flesh and blood; nor do I consider it at all necessary, with the truth before us that such is the case. The theory advocated by "W. P. W." I have, formerly, wished to entertain. The "father of the wish" was the simple fact that there was no remedy for the disease, known as a specific. Nothing but such facts as plain as common sense could not controvert, has forced upon me the theory which I now entertain; just such facts as I doubt not would change the views of "W. P. W." or any other living man, claiming a moderate share of acuteness and observation. I mean no reflections by the use of these terms; indeed, I have a high regard for all the writers of the *Cultivator*, and look upon them as a band of noble brothers, giving their experience and observation to each other for the interest of the whole. Let me here doff my cap to "A. T. L." for coming so timely to contribute his aid to advance the cause of truth. But like myself he can only assert a fact that has passed under his observation. The bare assertion of which, I do not think likely to change the views of "W. P. W.," or any of his adherents. This is not at all strange; evidence of this character and at so great a distance, cannot be received by the mind in the habit of solving its own difficulties and forming its own theories, especially, when supported by the learned M. D.'s who have contributed the weight of their learning and investigation in making up the theory. I shall reserve the right to "A. L. L." to preach the funeral of "W. P. W.'s" theory, when he, the Editors, and "W. P. W." shall think most proper to do so; and will give him one single instance, the last which passed under my observation, for his text on that occasion:

I had a good horse some 10 years old, (getting towards the age when they are generally more quiet upon the approaches of the fly to deposit their eggs, which breeds the bots) at work very leisurely in the field; he came and ate his dinner as usual, and returned to the plow without any symptoms of distress. About the middle of the evening, the plowman brought the horse to the house and reported him indisposed. I looked at him and thought him but slightly afflicted, and could not judge from any symptoms the nature of the disease, as he stood still, except a little trembling; evinced no desire to lie down, and only moved when forced to do so. As is my habit, we used some external remedies only. The trembling continued to increase till it could be heard at considerable distance, the horse still standing. After some time he laid down, and without any other effort worthy of note commenced straining; his straining was so great the rectum came out some 10 inches, I suppose, and I began to think probable the whole intestines were coming out. Until then we entertained hopes of his recovery, and this unnatural straining and internal derangement was about the first evidence we had of bots. I was then certain the food got in an unnatural channel. He soon died, and curiosity led me to have him cut open and examined. The servant attending the operation in search of the grub, for some time kept reporting the maw as sound. I made him take out the intrails and turn it over, when the cause of the horse's death was plain before my eyes—while one side was sound, the other was almost entirely eat up, in great round holes, large enough for an egg to pass through without any difficulty. These holes killed the horse, and they killed him about as soon as he would have died had they been musket balls.

Such is my incredulity, that the bare theory of no living man can make me disbelieve a fact seen with mine own eyes. Had "W. P. W." been there to apply his microscopical investigation to the bots which had done the work, he would have found them filled with flesh and

blood. I am sure such an investigation as this would have convinced him. I am equally certain nothing less will. I am more certain of this, than I am that it is a worm which gives gapes to a chicken and kills it, although I have frequently twisted them out of their throat. While evidence of this character cannot fail to change a theory, however firmly fixed in the mind it may be; yet, as there are so many constructions and different ways of accounting for things to which we are not eye witnesses, it is almost impossible to get the assent of the mind to receive it as truth.

I will put a question to "W. P. W." which I should like to hear him answer. Can no combination of circumstances arise by which the horse might retain the bot too long in the stomach after reaching maturity?

I cannot, in justice, quit the subject without one passing remark in reply to what he has said about the instinctive dread of the horse to the approach of the fly. That the horse dreads the gad fly is a conceded point. I hold it is an instinctive dread, and he contends it is from pain inflicted by the hooks or claws of the fly. I must be permitted to put one or two more questions to him for solution. Can there be pain inflicted upon any animal without some sign, either of blood or a swelling of the parts disturbed? If a pain corresponding with the hatred the horse bears the gad fly, were so often applied to the same places on the horse, as they are in the habit of making their applications, would not these parts be very much swollen or there be a gore of blood such as your hated flies produce? Come, my friend, "W. P. W.," speak out plain, and to the point; you say I claim a good deal for the horse's instinct, and, inasmuch as it is not sufficient to keep him from getting the egg in his mouth, you will not allow him any at all? I answer, had Nature not been discordant in her work, much of pain and suffering would have been avoided; and were each of the eggs of this fly furnished with the same buzzing note which the fly has, his instinct, or if you please, his brain would have kept them out of his mouth. While I claim instinct for the horse I claim just as much for the fly. Perhaps my friend would prefer the term brain. I shall not dispute that point, but will say it is the same sort of brain as that which marks the bee, the prince of mechanics. Instinct or brain, the fly will be certain to make the deposit at the right place. It (the fly) must be a very sound reasoner to know the horse would never find it on the hind leg; it must calculate well to know if put under the throat, where the horse's mouth can never get, that he will be certain to rub it off in his manger, or if placed upon the withers, horses are in the habit of licking and biting each other upon that part. So it is, and their instincts keep up a constant warfare—all to give man trouble, upon the same principles and for the same reasons that thorns and thistles grow. As to the hooks in the leg of the fly, I have never yet been able to detect their formidable character. I have never examined with a microscope, though I have frequently handled them in my naked hand, and regard them about the same as a butterfly's. Neither the advice of my friend, "A. T. L.," or the theory of "W. P. W." have yet changed my views about the necessity and importance of greasing the egg, as I conceive that to be the only state in which the bot can be managed. It is said that the warm breath blown upon the nit for a few minutes will hatch the young bot. If the greased one will hatch as readily as the one not greased, I will quit the practice and try some other remedy. If it will not hatch at all (and I have never succeeded in hatching one) why not continue it? It is a simple and I regard it as a safe remedy. I must confess, however, I have not proved it in all its aspects. Let us adopt it and exterminate the bots entirely from the land.

J. A. T.

Near Brownsville, Tenn., Jan., 1855.

PLOWING IN GUANO.—A correspondent of the *Country Gentleman*, to an inquiry as to the best method of applying guano to clay lands, says:

"I have tried it on clay land that had been in grass for five years. On one half the field I plowed it to the depth of seven inches, and on the other half harrowed in, planted it all in corn, and staked off an equal number of hills from each part. It all came up equally well, but by the early part of summer there was a marked difference of the field, which continued throughout the season; and upon husking, that which had been plowed in [and staked off upon planting] produced nine bushels, while that which had been harrowed in produced but five bushels, showing the advantage of plowing it in, even in heavy clay soil. The soil was a slate and the amount used was about 200 lbs. to the acre."

AGRICULTURAL SURVEYS OF THE SEVERAL DISTRICTS AND COUNTRIES.

The following programme is marked out by EDMUND RUFFIN, the distinguished agriculturist of Virginia, for conducting agricultural surveys. Though intended for his own State, the principles, with slight modification, may be adapted to any other State:

GENERAL PLAN AND ARRANGEMENT, AND SOME OF THE PARTICULAR SUBJECTS, SUGGESTED FOR A REPORT OF AN AGRICULTURAL SURVEY OF A COUNTY, OR ANY OTHER AGRICULTURAL DISTRICT.

I. *General features and character of the country, in the following respects:*

1. Situation, extent, and natural physical characters and divisions, illustrated, by a map of small size.
2. Surface and face of the country, and diversities of elevation and exposure.
3. Climate, and especially any peculiarities thereof, and the causes.
4. Geological characters of different parts, so far as known.
5. Useful minerals, and especially such as are, or may be, valuable as manures.
6. Water, in reference to uses of navigation, irrigation, propelling machinery, &c.
7. Market, towns, and manner of, or facilities for transportation of products.

II. *General description and management of lands.*

1. Classes and kinds of soil, and of subsoil, to be designated (when extensive) on the map.
2. Quantities of arable land, or meadow, (not subjected to ordinary tillage, or rotation of crops,) of land, swamp, or marsh, and other waste or unproductive lands.
3. Sizes of farms, usual or unusual.
4. The usual crops, of large and of small culture.
5. Rotation of crops.
6. Manner and depth of plowing, and preparation for tillage, and general management of crops.
7. Expense of cultivation.
8. Agricultural products proper to be made in the locality, and which are brought from other places, and the extent of such supplies.

III. *General market prices of lands, past and present, and causes of rise or fall in prices. Rates of rent.*

IV. *Drainage and embankments.*

1. Of tide marshes and swamps.
2. Of swamp or other low and wet lands, higher than the tide.
3. Drainage of arable, or high and firm lands, for either surface water or springs, and by either open or covered drains.

V. *Implements and machines for agricultural operations.*VI. *Fencing and enclosing.*

1. Kinds and costs of fencing.
2. Advantages and disadvantages of the separate enclosing of each field, or each farm, compared to dispensing with either or both; and instead, confining live stock to enclosed pastures, or herding them, especially in reference to hogs.

VII. *Grass, husbandry, grazing, and green or vegetable manuring crops.*

1. Natural meadows on moist ground.
2. Artificial (or sown) grasses on permanent meadows or pastures.
3. Artificial grasses, peas, or other green or forage crops, alternated with tillage crops on arable land.
4. Mowing and hay.
5. Crops of grass, peas, or weeds, left to manure the land on which they grew.

VIII. *Live stock.*

1. Teams, or animals for labor.
2. Animals reared and kept for their products, or fattened for sale or home consumption, and their management.
3. Animals purchased from abroad, and general cost thereof.

4. Comparative profits of hogs confined to enclosed pastures, or to styes, and those ranging at large.

IX. *Dairy management and products.*

1. Products consumed or sold.
2. Supplies of butter and cheese from abroad.

X. *Manures.*

1. Cow-yard and stable manure, and other stock supplies. Collection and choice of material—preparation, and effects. Fermented and unfermented manures.

2. Straw, leaves, or other unmixed vegetable matters, unrotted when applied.

3. Peat, marsh, or swamp mud as manure.

4. Fossil shells or marl.

5. Lime.

6. Any supply of carbonate of lime from other sources.

7. Wood ashes—coal ashes.

8. Bone dust, or phosphate of lime in other materials.

9. Gypsum.

10. Guano.

11. Any earths containing fertilizing ingredients, and fit for manures.

12. Any other neutral salts, or materials containing them, useful for manuring.

13. Composts of different manuring materials.

XI. *Orchards and their products, vineyards, vegetable gardens supplying products for sale generally and extensively.*XII. *Woodland.*

1. General description of the growth of different kinds of lands.

2. Uses and value of timber and other products.

3. Proportion of farms necessary to be kept under wood.

4. Disadvantages and cost of excess of wood-land to agriculture.

XIII. *Old and bad practices, and new or recently introduced processes or improved practices in agriculture.*XIV. *Notices or suggestions of new or neglected resources for agricultural improvement.*XV. *Obstacles to agricultural improvement and profit.*

1. Obstacles opposed by natural and unavoidable circumstances.

2. Obstacles caused by erroneous governmental policy, or by omission of proper legislation.

3. Obstacles caused by individual action or neglect.

XVI. *Unhealthiness of residents, caused by climate and condition of the country and its agriculture.*

1. Local sources of malaria, their extent, operation, and degrees of malignity—such as rapid streams sometimes overflowing the bordering land—tide-water marshes, fresh or salt—swamps, whether in their natural state or when under culture—mill-ponds, and the passage of transient and irregular floods of fresh water over salt marshes.

2. Accumulation of putrifying matters, animal and vegetable, in towns, their injurious effects on health, and the means of rendering them innoxious, and useful as materials for manure.

3. Increase or decrease, and greater or less extent and virulence of malarious diseases, in past time and now, and the supposed causes of change.

4. Means of removing or diminishing the causes of such diseases, within the reach of individual proprietors, and such means as cannot be used without governmental interposition, and compulsory direction.

XVII. *Any other subjects not here indicated, which may be connected with the agriculture or economy of the county or other locality treated of, and of which the discussion would be useful in aid of improvement.*

THE TEXAS OAT GRASS ALIAS THE RESCUE—EXPERIMENT WITH RYE.

MESSERS. EDITORS—Owing to the continued dry weather which followed my January report in the *Cultivator*, I did not cut my rye, or the grass, during that month, and hence my omission to furnish you with an article for the February number; and in this report I regret to say I cannot be as accurate as I desire. The servant accustomed to cutting the rye was not aware that I intended to weigh each cutting, and therefore repeated this operation without my knowledge. He says, however, that it did not fall short of the first cutting more than one-third, which weighed, as reported, fifteen pounds.

The grass, since that time, seems not to have grown one inch in height, but is beginning to enlarge its dimensions, somewhat, latitudinally.

ALGERNON.

February, 1855.

CIRCULAR—HERD BOOK.

DEAR SIR—During the past year, I have been inquired of, by several Short Horn Cattle breeders, when I intended to issue a second volume of the American Herd Book. My reply has been, "not until the Short Horn breeders would come forward in sufficient number to patronize the work, by furnishing the pedigrees of their stock, and to buy the book to an extent sufficient to warrant the expense of its publication." The first volume of the American Herd Book, which I published in 1846, is still indebted to me in the cost of the book itself, throwing in the time and labor I spent upon it.

At the late "National Cattle Show," held at Springfield, Ohio, a large number of Short Horn breeders were assembled, from ten or twelve States, and the Canadas. The subject of a continuance of the publication of an American Herd Book was fully discussed by them. It was agreed that, with so large a number of Short Horn Cattle as are now owned and bred in the United States, and the Canadas, a Herd Book, devoted to the registry of American Cattle was imperatively demanded. The expense and trouble of transmitting their pedigrees to England, and the purchase of the voluminous English Herd Book, now costing at least \$200, is no longer necessary; and that as the breeding of pure Short Horn blood must depend much upon having a domestic record at hand, when the requisite information can be obtained, and that of a reliable character, a Herd Book is indispensable.

In pursuance of the unanimous request of the gentlemen engaged in breeding Short Horns, above alluded to, together with many individual solicitations which I have

received from other breeders during the past year, I have concluded to issue this, my prospectus for a second volume of *The American Herd Book*, and to request you, if you feel an interest in the work, to inform me at your earliest convenience, whether you will aid in its publication by sending a record of your animals for registry, and to designate the number of volumes of the book you will take. The size of the work will, of course, depend upon the number of animals registered, which, if this opportunity is embraced by the breeders generally, will be several hundred pages, octavo, and illustrated with portraits of such animals, properly engraved, as the owners may be desirous to have inserted, they furnishing the cuts for the purpose.

I shall also give an account of all the recent importations into the United States. A copy of the Catalogue of each separate herd will be given, whenever they can be obtained, together with the account of their sales, the prices at which they were sold, purchaser's names, &c. In short, every matter of interest in relation to them, so far as it can be obtained, will be given.

All papers relative to such information will be thankfully received, sent in my Post Office address at Black Rock, New York.

As it is necessary that I get to work by the first of this month, you will oblige me by replying immediately, and informing me whether you will have your cattle recorded, and if so, what the probable number will be, and the number of volumes you will take. The recording fee for each animal will be fifty cents; the price of the book five dollars. The recording fees, will be expected to be remitted in advance, when the pedigrees of the cattle are forwarded, and the book paid for on delivery.

If, by any casualty, the book should not be issued, the advance money will be promptly refunded.

That there may be as little uncertainty as possible, I wish that the reply to this may be as prompt as convenient, that I may know whether I shall be justified in undertaking the work; if so, I will give you notice of the fact as early as the first of March, 1855, on receiving which, your pedigrees and insertion fees will be required to be sent immediately.

Very respectfully yours,

LEWIS F. ALLEN.

Buffalo, Black Rock Post Office, N. Y., Dec., 1st, 1854.

P. S.—As I cannot be presumed to know the name and address of every Short Horn breeder in the country, you will oblige me by sending one of these circulars to every breeder with whom you are acquainted, or to whom you have sold "Herd Book" animals, and give me a list of others, that I may send them a circular, so as to give as extensive information as possible on the subject.

L. F. A.

AGRICULTURAL SOCIETIES.

Of the benefit and importance of associated effort in agriculture, the *Cheraw* (S. C.) *Gazette* thus discourses:

"Recently, we very briefly called the attention of our planter friends to the importance of organizations to promote the success of agriculture among them. And in view of the importance of the subject we now take the liberty of referring to it again. Experience everywhere most conclusively demonstrates the value of such organizations. Even in old England, where the lights of a thousand year's experience, are at the command of the planter, Agricultural Associations are still the order of the day—are still the cherished means of diffusing knowledge among their members. We have not yet arrived at perfection in any of the Arts or Sciences, nor until we do so, can we safely dispense with the practical results of the ex-

perience of our fellow laborers. Precept without example, is like faith without works—it is dead and valueless.

"Suppose that A., (and our readers can at a moment's warning point to many such,) enters upon his profession (planting) with moderate means, and in the course of his life, by industry, economy and untiring perseverance, accumulates a reasonable fortune. Now, isolated as most of our planters are, we would like to know what use he has been to his neighbors and to the State, save in the amount of taxes he has contributed to the support of the government? Every beneficial result of his experience is locked up in his bosom, and will descend into the same grave with his body. And this is owing to no peculiar fault of his; but it is the natural result of isolation. Can our planters be desirous of winning such an inglorious distinction? We know they are not. But if they were animated by no higher motive, by no nobler desire, than the mere accumulation of wealth, then the very best means to promote that object, would be to profit by the experience and example of others, which are most easily attainable through Agricultural Associations. These Associations afford the means of comparing the actual results of the experience of their members, attainable in no other way."

A PRICELESS COW.—The *Mobile Tribune*, has the following notice of a Devon cow:

"We have occasionally observed in the agricultural papers notices of fine milking cows, but we think *Mobile*, in one case at least, can surpass them all. A gentleman in this vicinity—who is too modest to have his name mentioned—has a Devon cow, six years old, running at large on the commons every day, but kept up at night and well fed on bran, hay, vegetables, &c., which gave the past year 1,620 gallons of milk. The dairy-woman's memorandum is as follows:

First three months, average, 6 gallons of milk and 12 pounds of butter.

Second three months, 5 gallons of milk and 10 pounds of butter.

Third three months, 4 gallons of milk and 8 pounds of butter.

Fourth three months, 3 gallons of milk and 6 pounds of butter.

The milk at 40 cents per gallon, which is the common price here, would amount to \$648. This shows the importance of having a full blooded cow. In the present instance the cost of keeping is no more than an ordinary country cow, and yet the value of milk for one year is nearly \$650.

TRUE PHILOSOPHY.—An old man was toiling through the burden and heat of the day, in cultivating his field with his own hand, and depositing the promising seeds into the fruitful lap of the yielding earth. Suddenly there stood before him under the shadow of a huge linden tree, a vision. The old man was struck with astonishment.

"I am Solomon," spoke the phantom, in a friendly voice.

"What are you doing here, old man?"

"If you are Solomon," replied the venerable laborer, "how can you ask this? In my youth you sent me to the ant; I saw its occupation, and learned from that insect to be industrious and to gather. What I have learned I have followed out to this hour."

"You have only learned half your lesson," resumed the spirit. "Go again to the ant, and learn from that insect to rest in the winter of your life, and to enjoy what you have gathered up."—*German Allegory.*

Early fruit trees should be protected from the frost by spreading straw around the roots, which will prevent the buds from starting.

TILL LITTLE AND THAT LITTLE WELL.

'Tis folly in the extreme to till
 Extensive fields and till them ill.
 The farmer, pleased, may boast aloud
 His bushels sown, his acres plowed,
 And, pleased, indulge the cheerless hope
 That time will bring a plenteous crop.
 Shrewd common sense sits laughing by,
 And sees his hopes abortive die;
 For when maturing seasons smile,
 Thin sheaves shall disappoint his toil.
 Advised, this empty pride expel;
 Till little and that little well,
 Of taxing, fencing, toil, no more
 Your ground requires when rich than poor;
 And more one fertile acre yields
 Than the huge breadth of barren fields.

SUGAR TRADE OF THE UNITED STATES.


THE N. Y. *Shipping List* has prepared valuable statements and tables exhibiting the sugar trade of the United States, from which we learn that the total receipt of foreign refined sugar into the United States for the year ending Dec. 31, 1854, was 165,924 tons, against receipts of 212,746 tons in '53, and the quantity taken for consumption in 1854 was 157,355 tons, against 240,610 tons consumption in 1853, 196,553 tons in 1852, 181,047 tons in 1851, and 43,015 in 1850 being a decrease in the consumption of 1854, as compared with 1853, of 49,756 tons, or over 24 per cent., while the total consumption of 1854, (assuming the stock of domestic 1st January each year to be equal,) was 325,293 tons, against 372,983 tons in 1853, or an increase of nearly 8½ per cent.

The very large falling off in the quantity of foreign sugar, is attributable chiefly to the unprecedented crop of Louisiana, which was 449,824 hhds., and the low price at which it was offered, the yield being by far the largest ever gathered in that State, though produced from a smaller number of plantations, some growers having abandoned the culture of the cane and substituted cotton, the returns obtained not being considered remunerative. The increase in the consumption for some years has been at the rate of 9 to 10 per cent., but the past years it has only been a little over 3 per cent., owing to the stagnation that has pervaded the channels of trade, and the embarrassment and depression that has existed almost throughout its entire course.

The quantity of sugar made from molasses the past year shows a considerable diminution when compared with the quantity so produced in 1853; it is estimated at 12,623 tons, or 50,000 hhds., 53,000 yielding 500 lbs. each, and 8,000 of concentrated 600 lb. each, against 66,500 hhds. (14,977 tons) in 1853; the estimate given is believed to be rather over than under the actual amount; the falling off is owing, in a great measure, to the low prices that have ruled for raw sugar, and the high rates which molasses has commanded, thus diminishing the profits and production, and rendering the business unremunerative. If to the above figures we now add the yield of the maple tree, say 12,300 tons, and the estimated consumption of California and Oregon, 4,700 tons, would give a total consumption in the United States of 414,981 tons — *Baltimore American*.

TO KEEP WORMS OUT OF BEE HIVES.—I use common box bee-hives, and no other. I set them on small round stones, one under each corner of the hive, from one-half to one inch in diameter. This gives the bees room, and they will drive off the millers, which lay their eggs in small crevices. I have never been troubled with them since I adopted this method.

RICHARD WILLET, Cambria, N. Y.
 [Germantown Tel.]

 A gentleman at the North caught in his garden last summer with 24 wide mouthed bottles, partly filled with molasses and vinegar, three bushels of flies, bugs, millers, &c. The bottles were hung upon the garden fence. During the first seven days, the amount of flies, &c., caught, was 42 solid quarts.

FACTS ABOUT THE UNITED STATES.

THE United States is composed of 32 States and 9 Territories.

They contain a population of 25,000,000, of whom 21,000,000 are white.

The extent of sea coast 12,669 miles.

The length of its ten large rivers is 20,000 miles.

The number of miles of railway in operation is 20,000, which cost \$600,000,000.

The length of canals is 5,000 miles.

It contains the longest railway on the globe—the Illinois Central—which is 734 miles.

The annual value of its agricultural production is \$200,000,000.

The most valuable production is Indian corn which yields annually 400,000,000 bushels.

The amount of registered and enrolled tonnage is 5,407,010 tons.

The amount of capital invested in manufacture is \$600,000,000.

The amount of foreign imports in 1853 was \$267,978,947, and of its exports, \$230,971,167.

The annual value of the products of labor (other than agricultural) is \$1,500,000,000.

The annual value of the income of their inhabitants is \$1,000,000,000.

The value of its farms and live stock is \$500,000,000.

Its mines of gold, copper, lead, and iron are among the richest in the world.

The value of gold produced is \$100,000,000.

The surface of its coal fields is 138,131 square acres.

Its receipts for customs, &c., &c., in 1852, was \$51,472,274, and its expenditures \$43,543,263.

Within her borders are 80,000 schools; 6,000 academies; 234 colleges, and 3,800 churches.

A MODEL NURSERY.

A travelling correspondent of the *Louisville Journal*, gives us the following sketch of the extensive Nurseries of Messrs. ELWANGER & BARRY, near Rochester, New York. We hope the day is not far distant when we may have many such in this fair Southern land—the true and natural home of the choicest gifts of Pomona, the fruit goddess:

"While at Rochester I spent an hour or two at the Mount Hope Nurseries of Messrs. Elwanger & Barry. This is probably the most extensive commercial establishment of the kind in the United States, occupying 250 acres of land, closely set in nursery trees and plants, embracing almost every variety that has been introduced into our country. The sales amount to about \$70,000 annually. The benefits derived from such establishments, in widely disseminating all the choicest fruits can hardly be estimated. Each succeeding year adds to the constantly increasing taste for their cultivation.

"Trees and plants in the Mount Hope Nursery now [September] present as thrifty and vigorous appearance as is usual in the most favored season, which I suppose is the result of artificial watering. I asked Mr. Elwanger whether he had not adopted some plan for irrigation? His reply was that he had no need of that, but when there was an appearance of dry weather they employed an extra number of hands, to keep the surface of the soil constantly mellow by the use of the cultivator. This, if applied in time and repeated, is the great and sure remedy for drouth, whether in the nursery or the corn field.

"Specimen grounds of pears, plums and cherries occupy about six acres, mostly of dwarf trees. Although the trees are young, many of them were literally loaded with the most luscious fruit. It is wonderful to witness with

what profusion these miniature trees will produce under the care and management of intelligent cultivators. The cherries, of course, and the earlier varieties of pear and plum were out of season, but of a great number which were still in full fruit, I remember some of the leading varieties were the White Doyenne, (the celebrated Virgalieu, of New York market) Louis, Bonne d' Jersey, Easter Beurre, Vicar of Winkfield, Napoleon, Bartlett, Oswego Beurre, Glout Morceau, Winter Nelis, &c., &c. Among the great variety of plums in full fruit, worthy of mention, was the Jefferson, a most superb sort. Duane's Purple, though not of the best quality, yet its dark purple, covered with its rich bloom, presented a most tempting appearance. Pound's Seedling, a newly imported variety, is one of rare excellence and beauty. The Green Gage, the prince of plums, was seen in its greatest perfection. It is worthy of remark that while the fruit of this variety is the best of the entire catalogue, the tree is one of the most ill-shaped and poorest growers, while the numerous seedlings from it are among the best proportioned and most vigorous trees. I inquired what course had been adopted for the protection of this fruit from the ravages of the curculio, and was informed that although the insect appeared in their grounds in the greatest numbers, yet they had been completely successful in protecting the fruit, by the most simple method of shaking the trees once a day over sheets, upon which the insects fell, and from which they were picked up and destroyed."

Horticultural Department.

WORK FOR THE MONTH.

[MARCH (Latin, *Martius*) was so named by the Romans in honor of *Mars*, their god of war, and the supposed father of Romulus, in whose arrangement of the year it was the first month. It answers the Jewish *Nisan* or *Abid*, (Neh. ii. 1.) the seventh of their civil and the first of their sacred year. By the Saxons it was named Hlydmonath the loud or tumultuous month; and also Lenetmonath, i. e. Length-month, from the length of the days then beginning to exceed that of the nights.]

THE PLANTATION.

We have always counseled the raising of an abundant supply of provision and provender for man and beast, upon the plantation; and now earnestly repeat our admonitions upon this subject. The war in Europe still continues, and there is no immediate prospect of a decline in the price of breadstuffs or any other of the necessities of life. Every planter, gifted with proper foresight, will make the abundant production of food his first study. The entire "force" of the plantation should now be set vigorously at work preparing for and putting in full crops of *Corn*, *Irish* and *Sweet Potatoes*, *Spring Oats*, early *Cow Peas*, *Millet*, *Doura* and common *Corn* (broadcast and in the drill, for fodder) *Lucerne* in the drill, &c., &c.

In preparing for your regular *Corn* crop, do not forget our advice of last month (page 57.) Plow or subsoil your land 10 or 12 inches deep (15 inches would be far better!) manure heavily, and plant early. Do not lose a moment, after the danger of late frost is over.

As soon as you have finished the planting of *Corn*, and other provision crops, prepare for *Cotton* planting—but not till then. The remarks of one of our contemporaries upon this subject, are worth quoting. He says:

"It is to be hoped that cotton planters will not be betrayed by the present low prices of cotton and their want of money, to commit the folly of planting a larger crop than usual, in order to make up the required sum by increased quantity. Increase of production but aggravates

the evils under which the planters suffer; for too many strain all their energies to make Cotton, to the neglect comparatively, of supplies of provisions and other articles which every plantation needs, and of which a surplus can always find a ready market. This is especially true now, for while cotton is unusually low, almost every other article usually made on a cotton plantation is unusually high, and likely to remain so. Corn especially bears a very high price, with no prospect of an abatement. Corn is now a regular article of shipment to Europe, where it is yearly coming more into use. This country will also continue to have a large market abroad for all the flour, bacon, beef, and every other transportable article of food.

"Let not the prospect of an early peace deceive the planters into the belief that prices of cotton will necessarily, in that event, greatly rise, or prices of provisions greatly fall. Though the war should terminate to-morrow, it would be a long time before a material change could be effected in the causes now regulating prices.

"To diminish the production of cotton and raise an increased quantity of provisions would, at all events, be a safe policy."

So say we; and we cannot but repeat our formerly expressed opinion, that it is disgraceful that planters whose own hundreds (often thousands) of broad and fertile acres, and hands to cultivate them properly, should pay constant tribute to the North and West for the common necessities of life. Shake off this galling yoke, at once, and stand forth on your own soil, free and independent of all remote and unfriendly sections!

Sweet Potatoes should now be bedded out, and a certain provision made for an abundant supply of "draws." No crop cultivated in the South is more worthy of attention than the *Sweet Potato*. It is one of the most valuable crop for man or beast, and no planter should fail to have full "banks" at the setting in of winter, even if he does not make a "big crop" of *Cotton*. The *Hayti* (white) *Yams*, the *Yellow Yams*, and the large Red "*Negro Killers*" (so called) are all fine and productive varieties.

Irish Potatoes should be planted in drills 3 feet apart, and covered with a thick layer of pine-straw or leaves, as heretofore directed.

Millet and *Doura Corn* should also be sown plentifully, during the present and the next two months. Also, *Lucerne*, or "*Chilian Clover*." We prefer the drill system—land deep and rich—for these crops.

THE KITCHEN GARDEN.

Sow *Carrot*, *Beet*, *Parsnip*, *Cabbage*, *Lettuce*, *Radish*, *Salsafy*, *Tomatoe*, *Pepper*, *Spinage*, *Cucumber* and all other desirable varieties of seed, for a succession, to follow your earlier crops. Plant *Peas* and *Beans*. Set out *Cabbages*. Transplant from the hot-bed, *Tomatoes*, *Egg Plants*, &c., &c. Dip the roots in a thin batter formed of muck and water, and set out the plants towards sunset, carefully guarding against frost, if the nights are cold.

Dress your *Asparagus* beds, if neglected last month. *Strawberry* beds will also need attention. Pass over them with the hoe, cutting down all grass and weeds—spade, or plow under a thick layer of leaf-mould and leached ashes, and cover the space between the rows with 3 or 4 inches of *broomsedge*, *pine-straw* or *saw-dust*, as a mulch. The *broomsedge*, from its length, and the ease with which it can be gathered on most plantations, will be found very convenient to spread along the *Strawberry* rows, close to the plants. It will serve as a mulch, and also keep the fruit clean, and free from the grit and earth with which it is often injured, when left without any protection.

THE ORCHARD.

The *Peach Borer* should be scalded out of his hiding-place with hot water, or dug out with the sharp point of a thin-bladed knife. Be careful not to girdle the tree, or injure the bark, in hunting for him. After destroying all

you can find, in this manner, scrape away all gum and wood dust from the trunk, and fill in around it with *fresh* earth taken from between the rows. Heap this earth up around the tree in the form of a mound, 4 or 5 inches above the surface, and let it remain until fall, when it must be levelled down, the borers, if any, killed and the trunk and "collar" of the tree left exposed all winter. The *Curculio*, or Plum Weevil, so destructive to *Neclarines*, *Plums*, &c., will next claim our attention. In the meantime, do not neglect your young and growing trees—work around and manure them, and haul from the woods dead leaves and pine straw, to apply in the form of a *mulch* for the roots next month, and during the coming summer.

THE FLOWER GARDEN.

Clean up your borders, and sow the seeds of hardy *Annuals*. Sow the seeds of tender annuals in a hot-bed, and prick them out afterwards as soon as the season will admit. Plant cuttings of Roses and other shrubs in a shady situation, and when the weather becomes warmer, mulch and water them. *Bulbs* may yet be planted, though it is rather late. Go over your garden walks with the hoe and rake, cutting down the up-springing grass and weeds—spread on them a layer of *gravel*, and roll compactly, leaving them convex, or highest in the centre, so that the water may run off. *Dahlias* may be started in pots, to be transplanted into the open air as soon as all danger of frost is over. Trim up, and tie neatly to stakes, all Roses, climbers and drooping plants, and remove all dead twigs, branches, sticks, &c., from the surface, leaving it clean, open and inviting.

NOTES ON THE CULTIVATION OF THE CHERRY UPON THE MAHALEB STOCK.

OWING to the greatly increased attention which horticultural pursuits have commanded within the past few years, many trials and experiments have been made by zealous cultivators with the different varieties of fruits, and testing the various kinds of stocks, by subjecting them to different influences, and applying the same to the wants of the public and to the various sections of the country.

It is folly to presume that one variety of fruit, or a tree grown upon a particular kind of stock, or in a certain form, will succeed equally well in the many sections of our land, which embraces so great an expanse of territory, such a diversity of climates, and an almost endless variety of soils. To make the proper classification or assignment for fruits, so that one to a certainty can say that this will succeed admirably in this locality and fail in that, will require much labor and patient study for years. The results of some are already known, and it is this fact which has given horticulture such an astonishing impetus unexampled in any age.

Cultivating the Pear upon the Quince in the dwarf, pyramidal and half-standard form, is extensively practiced; also the Apple and Cherry, though not so largely; and in some degree the Peach and Plum.

Dwarf and pyramidal Cherries, which are produced by grafting or budding the different varieties of this fruit upon the Mahaleb stock, promise to be invaluable, more particularly to the Southwest and West. Standard Cherries, which are grown upon the Mazzard stock, in our naturally over-rich Western soils, produce such a great amount of wood as to bear little or no fruit; and owing most probably to the very imperfect ripening of the wood, the trunk of the tree splits upon the approach of winter and soon perishes. The hot and long continued dry weather during the summer months, in the Southern parts of Ohio, Indiana, Illinois, prevailing at about the time of the ripening of the fruit, is a serious drawback.

Those cultivated upon the Mahaleb stock, as experience proves, are much less affected by the extremes of wet and

dry weather, thereby insuring a good crop of fruit; the wood, too, is better ripened, so as to withstand most successfully the winter. The habit of the tree assumes naturally a pyramidal shape. The lower branches commence to form near the ground, and the future limbs shoot out at regular distances, as the leader of the plant rises. The tree being low, is well adapted to withstand the high winds that prevail upon the prairies, and more or less in all level countries; and the trunk or body of the plant is well protected from the destructive influence of the sun. Its most peculiar and promising characteristics are its great productiveness, and the early stage at which it bears fruit. Frequently mere bushes, only two or three years old from the bud, are literally laden with the choicest cherries. Upon clayey or very dry, poor chalky soils, it thrives finely where the Mazzard would not flourish.

Cherries of the *Duke* and *Morello* classes would attain the height of ten or twelve feet, if desired. With a little pruning once or twice a year, principally cutting back the extremities of the shoots, they can be made to assume a pyramidal shape or bush form, which, while it detracts nothing from their fruitfulness, well adapts them for gardens and places affording but little room.

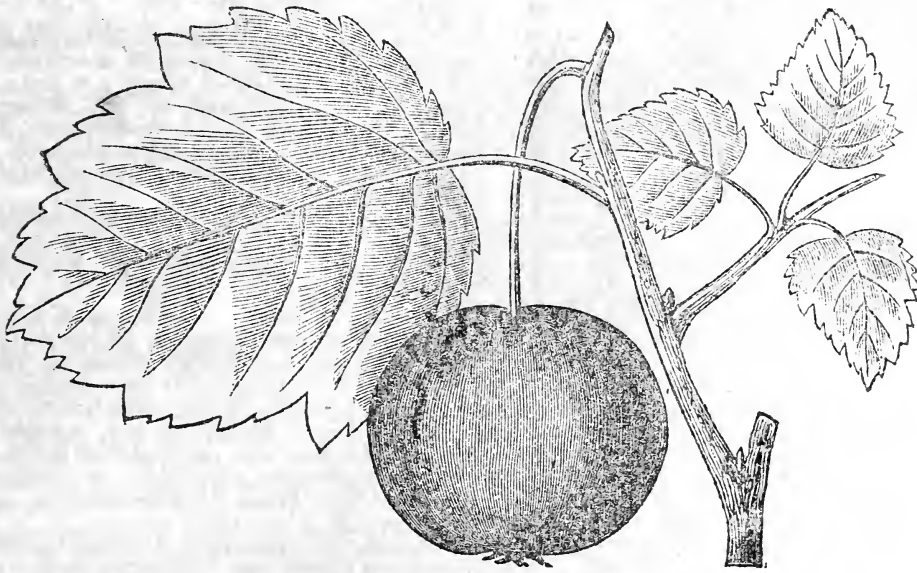
The more free and rapid growing sorts, comprised in the *Heart* and *Bigarreau* classes, would grow 14 to 16 feet, but they ought to be kept within less bounds by pruning. They are well adapted for gardens and orchards in rather sterile localities, where a little more space should be allotted them than is required for the *Dukes* and *Morellos*.—*Genesee Farmer*.

BANANAS IN TEXAS.

A Texas contemporary says:—With many of our most experienced horticulturists there seems to be a doubt as to whether the Banana can be cultivated to that degree of perfection in this State as in the West Indies; but I have always entertained a very different opinion. The following, which I have taken from a recent number of the *Victoria Advocate*, settles the question in my mind, beyond the possibility of a doubt; and I trust that some of our horticulturists will make an effort to introduce this most delicious of all of the tropical fruits into our county:

"BANANAS.—There can be no longer a doubt that this fruit will ripen in this climate. A fine bunch of bananas has come to maturity in the garden of J. A. Moody, Esq., of this town. They are as large and perfect, in all respects, as those brought from the West India Islands. This fruit ripened also this season in the gardens of Judge Cunningham and Mr. E. Linn. The trees thrive as in their native latitude. My plants, which were too young to produce fruit in the proper season, are now in bloom, or contain fruit too late to ripen. The trees grow in the West Indies 15 or 20 feet high; and they will probably attain that height here, as many in our gardens, although but two or three years old, are now six or eight inches in diameter, and ten or twelve feet high."

GUANO FOR MELONS.—One of our exchanges says:—We had a very fine melon patch which was well nigh destroyed by the striped bug. The vines had just commenced running, and in two or three days the bugs had stripped nearly every leaf. As a desperate remedy, we applied a handful of guano on top of the hill as far as the vines had run, taking care that it did not fall on the leaf. In twenty-four hours not a bug was to be seen; the vines had assumed a healthy and vigorous appearance, and are now loaded with fruit. This experiment was not on one vine only, but hundreds.



THE NORTH AMERICAN CRAB-APPLE.

THIS fruit is peculiar to this country. It is indigenous in the Western and Middle States, but is entirely distinct from the common apple generally cultivated. It is quite an interesting tree in the garden, as it is distinguished by dwarfish habits. It has beautiful rose-colored flowers, diffusing a very pleasant odor around. Its fruit is green and fragrant, small and very sour, but capable of being made into good preserves by the addition of sugar. It can be propagated from seed, or by budding, or by grafting upon the stock of the common apple-tree. The *Siberian Crab* (of which we have several varieties) is a beautiful and ornamental tree of medium size and a pendulous or drooping habit. The fruit is valuable for preserving. Many kinds of Crab Apple, as *Hugh's Virginia*, "*Chapman*," and others, are also very desirable for the making of cider.

HISTORY OF THE MELON.

THE history of the *watermelon*, so much esteemed for its sweet, delicious and cooling juice, as well as that of the *muskmelon*, or *cantaloup*, which is equally prized for its rich aromatic pulp, may be traced back to remote antiquity. The former, which is generally considered as the melon of the Jews, mentioned in various places in the Bible, is believed to have originated in Egypt, or Southern India, where it has been cultivated from time immemorial. It would appear that it was unknown to the ancient Greeks and Romans, as no definite information respecting it can be gleaned from their authors. The muskmelon, which is represented to have been a native of Asia, was known to the Greek and Roman physicians, and its properties and uses described by them at length.

The kind of muskmelon most esteemed among amateurs in various parts of Europe, and described, is the "*Cantaloup*," so called from a place about fourteen miles from Rome, the country seat of the Pope, where this fruit has long been cultivated. This variety is stated to have been brought thither from that part of Armenia which borders on Persia, where it grows in the greatest perfection and abundance. The flesh of this melon, when fully matured is delicious, and may be eaten with safety, without injury to the dyspeptic or those of the weakest stomachs. The form of the canteloups is generally roundish, with a rough, warty, or netted outer rind, or skin. The size of the plant is rather small, and the flesh for the most part of a yellowish color, though with some it is green.—*Patent Office Report*.

THE DOMESTIC CULTURE OF THE GRAPE.—The *Charleston Mercury* states that Mr. McDonald, residing near Aiker, S. C., has devoted himself to the culture of the grape with a success that promises to naturalize that branch of agriculture in the State. He has an extensive vineyard, in which may be found the best varieties of foreign and native vines. He has made considerable quantities of wine.

"SNEED WEED"—ITS FATAL EFFECTS.

MESSRS. EDITORS—In reply to Judge ANDREWS I would say that I understand Sneeze Weed is as fatal to horses or mules as strychnine is to cats and dogs.

We have a great deal of it in Edgefield on Horns' Creek and Stephens' Creek, and it is regarded as highly poisonous to stock.

One of my mules, while plowing, took a mouthful of the weed and was immediately taken with general tremors, profuse perspiration, succeeded by convulsions and death in 40 minutes. A tobaccoist camped in the same neighborhood at mid day and turned his two horses loose to graze; they were both taken very sick, and the wagoner went about a quarter of a mile for hard to drench them and on his return they were dead—from eating sneeze weed.

I have it in my pasture, and my horses and mules, when at large, will not eat it. I have noticed that, occasionally, it is cropped off, I think, by cattle, but am not certain that it will kill cattle, at least in homoeopathic doses.

STERNULATOR.

Edgefield, C. H., S. C., Feb., 1855.

DESTROYING MILDEW.—Marshal P. Wilder, in a communication to the *Journal of Agriculture*, speaking of mildew on grapes, greenhouse plants, and elsewhere, says:

"We have, for more than fifteen years, used sulphur for this purpose, and in no instance has it failed to effect a speedy cure. We have known instances where mildew, in the space of a few days, would spread its sporules over a large rose-house, destroying nearly all the foliage or the plants, but by the use of sulphur spread on the walks and over the plants, it was extirpated in a very short period."

TO GET RID OF GRAIN WEEVILS.—The agriculturist who wishes to get rid of weevils has nothing to do but, as soon as he is aware of their presence, to pitch the surface of some old boards and place them in his granaries; the pitch must, of course, be renewed several times in the year in order to keep the insects away. The mere fumes of the pitch are disagreeable to the weevils and will prove fatal if long inhaled.

AGRICULTURE.—Agriculture as a science is just beginning to assume and occupy that position to which it is justly entitled in the estimation of the world, that is, *the most important*. It was ordained by the Great Creator, "that man should live by the sweat of the brow," or in other words by tillage of the ground, and that wise economy by which we are enabled to produce the most of the sustenance of life, with the least labor, is no doubt approved of by Him, when the same is done in the honest exercise of the wits, with which we have been blessed by His Providence.—*Jacksonville "Sunny South."*

COTTON SEED MASHER.—Mr. Thomas Dixon, of Hancock county, (carrying out the suggestion of Dr. Lee, if we mistake not, in the *Southern Cultivator*) has appended two cylinders to his gin through which all the seed passes as it falls from the lint, and is cracked so as to prevent germination. This (as is clear from chemical as well as practical tests) makes it a much more valuable fertilizer, because much is lost in going through the process of heating. After mashing, we would suggest that the seed be kept under shelter in a cool, dry place, and not in too large a bulk, or with poles running through them to prevent heating. Mr. D. is one of our best practical farmers and has shown his good sense in taking the lead in this matter.—*Central Georgian.*

CEMENTED CELLARS.—Frequent inquiries are made on this subject. Cellars plastered at the sides and on the bottom with hydraulic cement will keep out the water without a drain, and will exclude rats, provided the work has been done in the best manner. Imperfectly executed, the water will leak in; and if the coat is too thin or too soft, rats will excavate beneath it, and then crack it off by piecemeal. It is unnecessary to inform our readers that the very best material is to be used; but some are not enough aware of the importance of giving it sufficient thickness. On dry and hard gravel, it may do well to apply the mortar at once to the excavated face of earth; but usually it is much better to cover the cellar bottom with paving stones, and where rather inclined to dampness, with two or three successive layers, the last of which may be quite small, or even coarse gravel will do. The mortar, made rather thin, is then spread smoothly over. In a few months, the whole will assume a flinty hardness, through which no rat, with all the cunning of a politician, can ever make his way. It will be as dry as a floor, and fruit, vegetables, and other articles, may be placed directly upon it without fear of dampness. It will not very soon wear out nor decay.—*Genesee Farmer.*

SEA ISLAND COTTON.—One of the most respectable firms in Liverpool, whose dealings in Sea Island Cotton are among the largest, thus writes to its correspondent in Savannah:

"The French Colony of Algiers, in Africa, is likely to compete with the United States in the production of fine Sea Islands. Two years ago, 10 bags were grown; last year, 140, and this year it is stated that 2,000 bags will be produced. This cotton, so far, has been sent to Havre, and the prices realized were from 2s. 4d. (58c.) to 4s. (\$1) per pound. We communicate this to you, thinking it may be interesting."

Domestic Economy and Recipes.

WASH FOR POROUS AND OTHER WALLS.—B. Barrett, of Ipswich, England, patentee. Take one bushel of limestone and dissolve it in 12 gallons of water; to this add 12 pounds of alum, dissolved in half a gallon of warm water, also half a gallon of beer grounds, and a quarter of a gallon of ox gall. This mixture may be colored with any suitable mineral color. It is laid on the surface of the wall, while luke-warm, with a brush. It soon becomes hard, and is very durable.—*Scientific American.*


HOW TO KEEP BUTTER FRESH.—A gentleman of our acquaintance has succeeded in preserving butter perfectly fresh, by putting it away in tin vessels and sealing it perfectly tight, so as to exclude the air. The butter requires no other preparation than is given to fit it for the table, and is packed in the vessel without any other substance. With proper care this plan is certain to succeed.—*Texas Mercury.*

TO MAKE LEMON WINE.—To every gallon of water add four pounds of sugar and the juice of ten lemons. Pare the lemons very thin; and half the peel being put in the tub, the sugar and water are boiled and poured over it; when cold, the juice is added. If the fermentation does not begin in the course of a few days, it is to be promoted by the addition of a toast of bread covered with yeast; the peel is then taken out, and the liquor put into the cask, which must be bunged up when the fermentation ceases.

A DISCOVERY.—A Paris paper states that Dr. Griseler, a French gentleman, has discovered that by adding a few drops of nitric ether to the most rancid oils all the disagreeable smell is removed, and that by afterwards warming the oil, to separate the spirit from it, it becomes as clear and as limpid as though it had never been otherwise than sweet. He says that a few drops of ether in a bottle of oil will prevent it from ever becoming rancid.

PREPARATION FOR BOOTS AND SHOES.—To one pound of tallow, and half a pound of rosin, melt and add about half an ounce of lamp-black. If the leather is new and dry, moisten it, and apply the mixture as hot as you can bear your finger in it. When the leather once becomes saturated it will be impervious to water and very durable.

CHLOROFORM COUNTERACTED.—Dr. Tobert de Lambelle, a distinguished physician of Paris, announces that a shock of electricity given to a patient dying from the effects of chloroform, immediately counteracts its influence, and returns the sufferer to life. The fact is worth knowing, if it be a fact.

 **Feeding red pepper to the hogs with their food, is said to be good for the kidney worm.**

WHAT DOES IT COST TO FENCE?—The amount of capital employed in the construction and repair of the wooden fences in the United States, would be deemed fabulous, were not the estimates founded on statistical facts, which admit of no dispute. Burknep, a well known agricultural writer, says: "Strange as it may seem, the greatest investment in this country, the most costly production of human industry, is the common fences, which divide the fields from the highways, and separate them from each other. No man dreams that when compared with the outlay for these unpretending monuments of art, our cities and our towns, with all their wealth, are left far behind. You will scarcely believe me when I say that the fences of this country cost more than twenty times the amount of specie that is in it."

PROVIDE FOR OLD AGE.—It is not well that a man should always labor. His temporal as well as spiritual interests demand a cessation in the decline of life. Some years of quiet and reflection are necessary after a life of industry and activity. There is more to concern him in life than incessant occupation, and its product, wealth. He who has been a slave all his days to one monotonous mechanical pursuit, can hardly be fit for another world. The release from toil in old age most men have the prospective pleasure of; and in reality it is as pleasing as it is useful and salutary to the mind. Such advantages, however, can only be gained by prudence and economy in youth; we must save like the ant, before we can hope to have any rest in the winter of our days.—*Book of Symbols.*

Advertisements.

PURE BRED ANIMALS AT PRIVATE SALE.

At Mount Fordham, Westchester county, New-York, eleven miles from City Hall, N. Y., by Harlem Railroad Cars.

HAVING completed the sale of animals advertised in Catalogue of 1854 (except Short Horned Bull "Balco," 9918) at prices highly remunerative, for which patronage I feel grateful, not only to the people of almost every State in our Union, but to the Canadas, Cuba and the Sandwich Islands. I will issue, on or about the 1st of March, a Catalogue for 1855, of Short Horned Bulls and Bull Calves, (some of which be on my friend and part associate. Mr. N. J. Becar. North Devon BULLS and BULL CALVES, South Down RAMS, Suffolk, Berkshire and Essex SWINE, of almost all ages and both sex, are now ready for delivery. This Catalogue will be illustrated with portraits of my prize animals.

Most of the original animals of my breeding establishment were selected by me, in person, in England, strictly in reference to quality, in my judgment, best adapted to the use of this country.
March 55—1st L. G. MORRIS.

FANCY LOP-EARED RABBITS.

A FEW pair of beautiful Lop Eared MADAGASCAR RABBITS may be obtained by addressing the subscriber.
March 55—1st D. REDMOND, Augusta, Ga.

GEORGIA RAILROAD.



PASSENGER TRAINS.

LEAVE Augusta, daily at 6 P. M. and (Sundays excepted) at 6 A. M.
Arrive at Augusta daily at 4.30 A. M. and (Sundays excepted) at 5 P. M.
Leave Atlanta daily at 6.30 P. M. and (Sundays excepted) at 4.30 A. M.
Arrive at Atlanta daily at 4 A. M. and (Sundays excepted) at 6 P. M.
CONNECTING WITH ATHENS BRANCH.
Arriving and leaving Union Point daily (Sundays excepted) at 11.30 A. M.

WITH WASHINGTON BRANCH.

Leaving Cumming daily (Sundays excepted) at 1.00 P. M.
Arriving at " " 9.30 P. M.

WITH SOUTH CAROLINA TRAINS.

Leaving Augusta daily at 6.30 A. M.

Arriving at Augusta daily at 4.00 P. M.

WITH ATLANTA AND LAGRANGE RAILROAD.

Leaving Atlanta, daily at 4.30 A. M.

Arriving at " " 6 P. M.

WITH WESTERN AND ATLANTIC RAILROAD.

Leaving Atlanta daily at 6.00 A. M.

Arriving at " " 6.00 P. M.

March 55—1st GEO. YONGE, General Superintendent.

FRUIT TREES, HEDGE PLANTS, POULTRY, ETC.

THE Subscriber will supply the following articles or ship them to order, viz:—DWARF PEACH TREES.—The collection embraces such kinds as "Chautmont," "Eclaire de Bruxelles," "Beurre de Capiaumont," "Duchesse d'Angoulême, Madeline," "Passe Colmar," "St. Germain," "Beurre Magnifique," "Van Mons Leon le Clerc," &c., &c., one and two years from the bud. All grafted on the Quince and suitable for Orchard or Garden culture, and immediate bearing. Price, \$40 per hundred or 70 cents each.

OSAGE ORANGE PLANTS FOR HEDGING.—50,000 strong and well rooted. Plants of my own raising, crop of 1854, assorted sizes and different prices, from \$5 to \$10 per thousand. For directions respecting the planting and culture of Osage Hedge, see February (1854) number of this journal. These directions will be furnished to all purchasers of plants, gratis.

OSAGE ORANGE SEED.—Pittin's best, at \$1 per pound.
NEW ROCHELLE OR MAMMOTH BLACKBERRY.—Lawton Blackberry or Seaco's Mammoth. A few vigorous and well rooted Plants of this famous Blackberry, for fall and winter planting. For description of this unrivalled Fruit, method of culture, &c., see July (1854) number of this journal, and *Agriculturist* for October, 1854. Plants carefully packed and forwarded to order at \$1 each. It is rapidly increased by off sets from the roots.

OSIER OR BASKET WILLOW.—Cuttings of one of the best varieties (*Salix Viminalis*), growth of 1854, will be furnished at \$1.50 per hundred or \$8 per thousand. For culture and use of the Basket Willow see page 86 of this journal for 1854.

QUINCE TREES.—A few hundred well rooted Quince Bushes for sale (apple shaped variety) at 25 cents each, or \$20 per hundred.
BRAHMA BOOTRA FOWLS.—A few pair, very superior, from Premium stock of last and present year. Also a variety of Chittagongs, or Gray Shanghaies. See engraving and description of "Pure Brahma Pootras" in July number of this journal, page 231.

All the above may be obtained by addressing
Dec—1st D. REDMOND, Augusta, Ga.

SOUTH DOWN SHEEP FOR SALE.

FOR sale, four South Down BUCK LAMBS, bred from the best specimens of this breed that could be obtained in the United States. They were lambed early in March; are very large, and very perfect in form; will be ready for shipment at the time of the Augusta Fair (October 1854.) Price, \$20, each.
June—1st RICHARD PETERS, Atlanta, Ga.

CHOICE POULTRY FOR SALE.

B. S. WELLER, of Nashville, Tennessee, offers for sale the following varieties of Southern raised Poultry, at New York and Boston prices:

Brahma Pootra Fowls,	Sumatra Game Fowls,
Gray Shanghai "	White Chinese Game "
Buff " "	African Bantam "
White " "	Bremen Geese,
Dominique Shanghai Fowls,	Hong Kong Geese,
Cochin China Fowls,	White Chinese Geese,
Black Poland Top-knot Fowls,	Poland Ducks,
Golden Hamburg "	Top-knot Ducks,
Silver " "	Black Cayuga Ducks,
Wild India Game "	Improved SUFFOLK PIGS, &c.

The above fowls took first Premiums at the late Fair in Tennessee, and are of superior quality.
Dec—3rd Address B. S. WELLER, Nashville, Tennessee.

POMARIA NURSERIES—1854-'55:

WE offer for sale a choice collection of the most celebrated and best varieties of PEACHES, PEARS, (both Standard and Dwarf, on Quinces), PLUMS, CHERRIES, NECTARINES, APRICOTS, QUINCES, FIGS, STRAWBERRIES, and NATIVE GRAPE VINES. Also, 10,000 APPLE TREES, well grown, embracing 150 varieties of rare excellence. We offer these to the trade, or by the hundred, at low rates. New and rare ROSES of the finest kinds and latest importations, FLOWERING SHRUBS, rare and beautiful EVERGREENS, &c. Priced list sent to all post-paid applicants. Packages carefully sent by Railroad. Address
Dec—3rd SUMNER & CRAMMOND, Alston, P. O., S. C.

DOWNING HILL NURSERY, ATLANTA, GA.

"Come sit under your own Vine and Fig Tree."
TWENTY THOUSAND Grafted and Budded FRUIT TREES for sale, consisting of over 200 varieties, the most extensive collection of selected Fruit Trees in the South.
No attention nor expense has been spared in getting up a variety of fruits adapted to our particular wants, soil and climate. I can assure all who want good Fruit, that I can furnish a collection equal to any to be found North or South.

The numerous applicants who failed the last season to get Trees from me in consequence of applying so late, can now be supplied, by sending in their orders early.

The numerous Rail Roads diverging from this place in almost every direction, afford great facilities for shipping packages.

Catalogues, on application, gratis. Send in your names for Catalogues.
Oct—1st WM. H. THURMOND.

SEEDLING APPLE STOCKS WANTED.

THE advertiser desires to procure two or three thousand SEEDLING APPLE STOCKS, of Southern growth, one or two years old, to graft into, the coming winter. Persons able to supply them will please address the Editors of this journal, stating price, &c.
Sept—1st

HIGHLY IMPROVED COTTON! BOYD'S EXTRA PROLIFIC!

THESE new and valuable variety of Cotton, far exceeds any Cotton we ever had in this section for yield, as is proven by a written report of Gen. Williamson, Capt. Bass, Matthew Whitfield, and other good planters, who have tested the merit of this Cotton the present year. Every Cotton planter living in a short climate should plant of this Cotton, as it produces a crop of squares and bolls in near half the time of the ordinary Cotton, checking the growth of the weed and going into maturity. It should be topped about the 20th of July, and if planted on a strong land, the side branches should also be topped. Much labor is wanted to the want of careful selection of highly improved seeds, not only of Cotton, but Corn, Wheat, &c. Planters wanting Seed had best apply early.

Price of the Seed per bushel—\$5.

Covington, Newton Co., Ga., 1854.

D. DICKSON.

CERTIFICATES.

COVINGTON, Ga., Sept. 26, 1854.—We planted this year "Boyd's Extra Prolific Cotton," introduced by D. DICKSON, of Covington, which has proved far the most productive Cotton we ever planted. It is no humbug, but a very highly improved variety of Cotton which we can recommend to our friends with great confidence.

JOHN FRANKLIN, ALFRED LEVINGSTON, DAVID COOK, HENRY CARTER, F. C. FULTON, RESHIE B. LACK, Wm. Cox, of Morgan County, THOMAS W. TINS, THOMAS WYATT of Jasper County, J. A. WILSON, B. J. ANNE of Morgan County, THOMAS HAMMONDS of Morgan County, L. MATTHEW WHITFIELD of Jasper County, JOHN D. CRIM of Chattahoochee County.

COVINGTON, Ga., Sept. 27, 1854.—We planted this year "Boyd's Extra Prolific Cotton," by the side of our other Cotton, no difference in the land or cultivation; Boyd's will make at least one bushel more than the other.

COVINGTON, Ga., Sept. 29, 1854.—We planted this year "Boyd's Extra Prolific Cotton," by the side of our other Cotton, no difference in the land or cultivation; Boyd's will double the other in production.

JOHN FASS, REUBEN COODRUFF,

JOHN S. WEAVER, JOHN W. of Coweta Co.

HOUSTON Co., Ga., Oct. 16, 1854.—I planted on the same half acre the present year, for an experiment, the seed of some half a bushel of the best improved varieties of Cotton known in this country, all having the same chance in every respect. I feel confident in saying that "Boyd's Extra Prolific" excelled in production either of the varieties, at least one-third, and some cotton more than that. It is the most prolific and closely bearing Cotton I have ever cultivated.

J. A. MILLER.

COVINGTON, Ga., Oct. 7, 1854.—At the request of Mr. DICKSON we examined a patch of "Boyd's Extra Prolific Cotton," planted on the 17th of May, on first and second quality of land, without manure. It is decidedly the heaviest balled Cotton we ever saw to the eye of it, notwithstanding the severe drought we had. We counted six-eight grown bolls on a stalk only twenty inches high, and 102 grown bolls on a stalk only three feet high besides a number of smaller ones. We know of no other variety of Cotton that would have produced such a crop of bolls in so short a time.

McKENDREW, LUCKER, LEWIS ZA HAY, JOHN S. HENDRICKS, FREDERICK COX of Whitfield County, JAMES THOMAS of Spalding, PERMEDIUS REYNOLDS, COLUMBUS D. PACE, BENNETT of CONYERS of Chatham Co., Ga., Jan. 17, 1855.—I planted last spring, one acre of "Boyd's Extra Prolific Cotton" seed on a half-acre of rich bottom land, with manure, while made over three thousand pounds of Seed Cotton per acre. I had the "Pomegranate" by the side of the "Boyd" on good land, and as well cultivated, which only made two thousand pounds per acre. The "Boyd" being a very early Cotton, matured nearly every boll.

GEORGE W. CORNWELL.

JASPER Co., Ga., Jan. 17, 1855.—I planted one and three-quarter acres of "Boyd's Extra Prolific Cotton" last spring. I got only two-thirds of a stand, yet it made 1575 pounds ginne Cotton.

BENJAMIN PERSONS.

AGENTS—A few seeds may be obtained from J. J. BARGE THOS. STOVALL & Co., M. P. STOVALL & L. HOPKINS, Augusta, Ga.; J. P. HIGH, Madison, Ga.; C. C. NORTON, Geeboro, Ga.; MORROW & KENDRICK, Moncks, Ga.; J. M. STANFORD & Co., Sparta, Ga.; T. & J. HIGHTOWER, White Plains, Ga.; W. S. & J. C. TURNER, Athol, Ga.; CHARLES D. ALLEN, Abbeville, South Carolina. C. PERSON, Eatonton, Georgia; W. J. ANDERSON, Fort Valley, Georgia. JONES PHILLIPS & Co., Griffin, Georgia; W. W. ROBT, Milledgeville, Georgia. A. M. ALLEN, Columbus, Georgia; GREENVILLE & SAMPLES, Chattahoochee, Ga.; O. MORSE, Forsyth, Ga.; W. H. NEWMAN, Ga.; FLOAN & HAWKINS, Kime, Ga.; C. B. ELBOURN, Ga.; W. H. COOPER, LaGrange, Ga.; J. A. & W. R. WILSON, University, Ga.; J. F. BROOKER, Chattahoochee, Ga.; SAMUEL DONALD, Donaldville, S. C.; M. ALEXANDER, Greenville, Ga.; SWANSON & CONNER, Monticello, Ga.; THOMAS TROUT & Co., Charleston, S. C.

Any person enclosing me at Covington, Ga., one dollar, I will send them a bushel Seed, either "Boyd's Extra Prolific," or the "Dean" Cotton, by mail, and pay the postage.

Feb 1855—1

D. DICKSON.

F. McCREERY,
Charleston.

R. M. HOOKE,
Chattanooga.

McCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING.

THE SUBSCRIBERS, Brown's Wharf, Charleston, S. C. Strict attention given to the sale of all Country Produce and Manufactures to the receiving and forwarding of Freight, and to the filling of orders in this market.

Feb 55—C'y

CATAWBA GRAPE VINES.

ROOTED VINES of three years old, raised by Mr. Charles Axt, may be obtained by Addressing D. REDMOND, Augusta, Ga.

DEAN COTTON!

THIS new variety of Cotton in this section, not only makes a very fair yield, but is very superior in point of staple, as is testified by a written report of General Williamson, Judge Harris, and others. Planters who raise large crops of Cotton could well plant a large portion of their crop of this Cotton, as it will wait much longer on the picker, without falling out; yet it picks easy, and the bolls are very large. It is peculiarly adapted to thirsty land, as the roots sink deep into the earth. It should be planted one-fourth wider in the rows than other cotton. Price of seed per peck, \$1.50; price of seed per bushel, \$5.

TESTIMONY IN ITS FAVOR.

The Houston Telegraph, (Texas) speaking of this new variety of cotton, says: "All who have cultivated the Dean Cotton, so far as we are apprised are delighted with their success, and are determined to extend its cultivation. The quality of this cotton so far from deteriorating, has steadily improved, and the demand for it in the market is daily increasing."

Extract from a letter from Messrs. Dean & Cramer, Commission Merchants at Galveston, Texas:

"Galveston, Texas, March 19, 1853.

MR. D. DICKSON—Dear Sir:—There has been about five hundred bales of Dean Cotton sold in Galveston this season. It usually sells from 35 to 40 per cent. more than the common kinds of similar classification. A lot of one hundred bales shipped to Boston sold for 15 cents. We could readily sell the first part of Mr. Geo. Dean's crop for 15 cents, but held it for a better price. DEAN & CRAMER."

Covington, Ga., Oct. 2, 1853.

We have examined the growth of the Dean Cotton, introduced in this section by D. Dickson, of Covington. Its yield is about equal to our common Cotton, the bolls are very large, and the staple superior to any Upland Cotton we ever saw.

EDW. L. THOMAS,
M. L. KENNON,

J. H. N. WILLIAMSON,
JOHN HARRIS.

Covington, Ga. Oct. 5, 1853.

I planted on the 14th day of May last, of the Dean Cotton, on red thirsty land; the stalks are large, and the bolls are numerous and large, and the best Upland staple I ever saw, being more than an inch larger.

HORACE J. BATES.

[From the Southern Recorder of the 26th December, 1854.]

A lot of five hundred bales Dean Cotton ginned in Parkhurst roller Gin, was sold in New Orleans, on the 11th, by Messrs. MAY, VANK OK & Co., at the high price of sixteen cents per pound. It was grown on the plantation of JOHN M. BURR, Wilcox Co., Alabama.

AGENTS—A few seeds may be had from J. J. BARGE; THOMAS STOVALL & Co.; M. P. STOVALL & L. HOPKINS, Augusta, Ga.; THOMAS TROUT & Co., Charleston, S. C.; O. MORSE, Forsyth, Ga.; A. M. ALLEN, Columbus, Ga.; J. M. STANFORD & Co., Sparta, Ga.

D. DICKSON.

Covington, Ga., Jan. 8th, 1855.

Feb 55—1

A. GARDELLE,

LOUIS DELAIGLE.

GARDELLE & DELAIGLE,

(former of Augusta, Ga.)

FACTORS AND COMMISSION MERCHANTS, Accommodation Wharf, Charleston, S. C.

REFERENCE—Messrs. Bustin & Walker, Augusta, Ga.; Doughty & Beall, Augusta, Ga.; J. Fraser & Co., Charleston, S. C.

Liberal Advances made on consignments of Produce.

September—6

GRADE DEVON HEIFER CALF FOR SALE.



A VERY well grown and superior GRADE DEVON HEIFER CALF, 6 months old; size, Judge WARREN'S New York Premium Bull "Keokuk" dam, a very fine Grade Durham Cow, of the Twigs or Kentucky "Patton" stock. [For Pedigree of "Keokuk," see Southern Cultivator of September, '53, page 281.]

D. REDMOND,

September—1

Augusta, Ga.

QUINCE TREES FOR SALE.



A FEW hundred well rooted QUINCE BUSHES for sale (apple-shaped variety) at 15 cents each, or \$20 per hundred.

Address

September—1

D. REDMOND, Augusta, Ga.

CORNER OR BASKET WILLOW CUTTINGS.

A FEW thousand choice and vigorous cuttings of one of the best varieties (*Salix Purshiana*) for sale at \$5 to \$10 per thousand—per single hundred, \$150. Address D. REDMOND,

September—

Augusta, Ga.

ORANGE PLANTS FOR HEDGING.



A FINE lot of my own raising; growth of present season. Also, Seed for fall and winter planting, with directions to insure their growth. Address D. REDMOND,

September—1

Augusta, Ga.

AUGUSTA SEED STORE,

(Nearly opposite the United States and Globe Hotels.)

THE Subscribers has received and will continue to receive throughout the season, his stock of Genuine and Fresh GARDEN SEEDS, crop of 1854. The usual deductions made to Country Merchants.


J. H. SERVICE.

N. B. Garden Seeds: Beans, White and Red Onions, White and Red Cover, Lucerne, Blue Grass, Timothy, Oats, Cereals, Oregon Peas, &c., &c.

Dec—5

CHEROKEE!

A VALUABLE LOT OF LAND FOR SALE.

 THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this Lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

For terms, &c., apply to the subscriber, or to Col. J. W. M. BERRIEN, of Rome, Ga., who will take pleasure in pointing out the land.

September—1st

Augusta, Ga.

EXTENSIVE COLLECTION OF SELECTED ROSES AND SOUTHERN RAISED FRUIT TREES.

AUGUSTA NURSERY.

F. A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camellia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE, Augusta, Ga.

Nov—1st

NEW AND WONDERFUL MACHINE,


WILLIAM STODDARD, PATENTEE.

THE SUBSCRIBERS having purchased the right of the STATE OF LOUISIANA in the best Machine ever invented, for the purpose of rifling and shaving SHINGLES, BARREL HEADING, &c., are now prepared to sell the Right of the Parishers, at prices sufficiently low to make it an inducement to purchasers.

The Machine is simple in its construction, and not liable to get out of order, capable of splitting and shaving Two Thousand Shingles per hour, better than made by hand. It is portable and can be worked by water, steam, horse or hand power.

Large inducements are offered to persons wishing to purchase the Right of several Parishes. We will have a Machine in the city of New Orleans in a few weeks. A. S. & A. D. HULL, Augusta, Ga., Nov. 1854. 4t

CROCKER & REES,

WAREHOUSE AND COMMISSION MERCHANTS.  Jackson-street below and on the opposite side of Warren's Range. The undersigned would respectfully inform their friends and former patrons that they will remove on the 1st September next to the NEW AND SUBSTANTIAL FIRE-PROOF WAREHOUSE on Jackson-street, below and on the opposite side of Warren's Range.

We will give our personal attention to all business entrusted to our care, as heretofore and hope to merit a continuance of the favor of former patrons. We are prepared to make, at all times, liberal cash advances on Produce in store.

Orders for Bagging, Rope, and Family Supplies will be carefully filled, and at the lowest market price.

Augusta, August, 1854—6t

JOHN R. CROCKER.
JOHN C. REES.

IMPORTED GARDEN SEED, &c.

THE Subscriber has on hand, a large and full assortment of the best English GARDEN SEED of every variety. Also, White and Red CLOVER; Lucerne, Herds, Blue and Timothy GRASS SEED; White and Red ONION SETTS; OSAGE ORANGE; OREGON PEAS; FARMER'S PLASTER; GUANO, &c., &c. For sale, either at wholesale or retail, by WM. HAINES, Augusta, Ga.

N. B.—Orders from the country will receive prompt attention. Jan55—8t

ATKINS'S SELF RAKER

REAPER AND MOWER.

THREE seasons use of this ingenious, beautiful and yet simple Machine, furnish convincing proof of practical worth. Three hundred, scattered into 9 different States the past season, mostly in inexperienced hands, and nearly all giving good satisfaction, cutting from 50 to 600 acres, proves it not only strong and servicable, but also simple and easily managed. It saves not only the hard work of raking, but lays the grain in such good order as to save at least another hand in binding.

It is warranted to be a good, durable Self-Raking Reaper, and I have also succeeded in attaching a mowing bar, so that I also warrant it as a Mower.

Price at Chicago, of Reapers \$170; of Mowing Bar, \$30; Discount on the Reaper, \$15, and on the Mowing Bar, \$5, for cash in advance or on delivery. Price of Mower, \$120.

Pamphlets giving all the objections and difficulties, as well as commendations, sent free, on post-paid applications.

Agents, suitably qualified, wanted in all sections where there are none.

Jan55—5t

J. S. WRIGHT,
"Prairie Farmer" Warehouse, Chicago.

AYRSHIRE HEIFERS FOR SALE

AT \$100 EACH.

HEIFER, "PARAGON," one and a half years old, calved March, 1853; Dam "Princess Mary," grand dam imported "Mary Queen of Scots;" sire, imported bull "Robert Burns." "Princess Mary" gave 18 quarts per day, "Mary Queen of Scots" upwards of 80 quarts.

Heifer, "MARIE LOUISE," one and a half years old, calved March, 1853; dam "Maria Teresa," by imported "Germantown," grand dam "Mary Queen of Scots," imported from Scotland; sire, imported bull "Robert Burns." "Maria Teresa" gave 2 quarts per day, "Mary Queen of Scots" gave 3 quarts.

Jan55—1st

RICHARD PETERS, Atlanta, Ga.

ACCLIMATED HOVEY'S STRAWBERRY PLANTS.

10,000 OF this noted variety of STRAWBERRY PLANTS—two years old, and warranted to bear well the next spring. Price, \$2.50 per hundred plants. Orders from the country executed with promptness and despatch. Apply to WM. HAINES, September—1st 217 Broad-st., Augusta, Ga.

AGRICULTURAL WAREHOUSE AND SEED STORE.

(NORTH EAST CORNER OF 7TH AND MARKET, PHILADELPHIA.)

THE subscribers are now prepared to offer the Public, one of the largest and best collection of AGRICULTURAL and HORTICULTURAL IMPLEMENTS and FLOWER, FIELD and GARDEN SEEDS, to be found in the United States. Having taken over seventy premiums for Implements at the Pennsylvania State Agricultural exhibition, at Philadelphia, the present season they can recommend the superior quality and variety of their Implements and Machines with the greatest confidence, and will furnish to order any thing for the Farmer or Gardener or Fruit-Grower, by wholesale or retail, Garden and Flower SEEDS, tested in their own grounds, neatly put up in boxes for dealers to sell again. Fruit and Ornamental TREES and SHRUBBERY of every description, from their Nurseries at Westchester, near Philadelphia. Native and foreign GRASS SEEDS for sale, as are adapted to our climate. They are, also, agents for SUPER-PHOSPHATE OF LIME, GUANO, and other fertilizers; also, for most of the new and improved IMPLEMENTS lately introduced.

Illustrated Implements, also Nursery and Seed Catalogues forwarded by mail to all post-paid applications.

PASCHALL, MORRIS & CO.,
Agricultural Warehouse and Seed Store,
Corner of 7th and Market, Philadelphia.

Dec—3t

ROWE'S UNRIVALLED PRIZE CRUSHER has had its patent extended for seven years from the 24th of April, 1854. It is generally conceded that this is the only Crusher worthy of the name. It has never failed to take all the first Honors and Premiums whenever exhibited, or brought in competition. It may be truly said, it has no rival. It is the only mill in the world that crushes to powder and mixes thoroughly, Corn, Cobs and Shucks or Straw; answering the treble purpose of Mill, Crusher and Straw Cutter. It is unrivalled for pulverizing Rock-plaster, Shells, Tan-bark, &c.; and will outlast, in wear, ten of any other Crushers. For particulars address JAMES ROWE, Patentee, Bainbridge, Decaturco., Ga.

I will furnish machinery for pulverizing Quartz and superintend the erection for \$60, and warrant the mill to crush a ton per hour of running time. This does not include a engine belt or pulley on the motive power. Any wanting Portable Fence, strictly practical, address as above Jan55—2t

WM. A. STON CORBIN,

FACTOR AND COMMISSION MERCHANT,

CORNER East Bay Street and North Commercial Wharf, Charleston, S. C., is prepared to make liberal advances on consignments of COTTON, CORN, SUGAR, FLOUR, GRAIN, HAY, &c.

Genuine Peruvian Guano Depot!

FARMERS' PLASTER, CHARCOAL, BONE DUST, MINERAL PHOSPHATE LIME, SUPER PHOSPHATE LIME, &c.

Always on hand

See 54 ly

OSIER WILLOW.

CUTTINGS of the *Salix Viminalis*, the best Osier Willow cultivated, will be furnished by the subscriber at \$2 per 1000. They can be forwarded during the winter or early spring, to all parts of the Union. Also, OSAGE ORANGE plants at \$1 per 1000.

Jan55—4t

S. P. HUGH, Albany, N. Y.

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March 55—tf

1855!

1855!

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A MONTHLY JOURNAL,

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[Dec—tf]

ROBERT NELSON.

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., APRIL, 1855.

NO. 4.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

TWO CROPS OF RICE IN ONE SEASON.

THE Columbia *Carolinian* publishes a letter from Signor Germano Lattis, of Egypt, (introduced by another from Edwin DeLeon, American Consul at Alexandria,) in which said Lattis expatiates upon a method which he has discovered, of making two crops of rice on the same ground in one year. For a consideration, the Signor proposes to introduce his system into the United States.

Mr. DeLeon says the result of his inquiries and inspection has been the conviction that a great discovery has been made by Signor Lattis, through which he is enabled to produce two crops of rice in five months from the same seed and an increase on the usual yield of at least thirty per cent.—*Sav. Cour.*

Whether this arises from some chemical preparation of the seed, or from his peculiar treatment of the plant, is his secret. I incline to the former opinion. But the facts are authenticated by witnesses of the most irreproachable character, and the experiments have been made on the land and under the eye of Mustapha Pacha, one of the royal family, who was educated at Paris, and is a man of shrewdness and intelligence.

Signor Lattis thus writes to the American Consul:—"My rice fields yield, as you know from personal examination, two successive crops from a single sowing, and within a period of about five months, provided that the temperature remains constantly above the mean of 20 degrees Reaumur. I think, therefore, that every country capable of growing cotton is fit for the cultivation of rice after my method. This cultivation is not effected by the usual method of irrigation by submersion, the water being allowed to flow on the rice fields only at stated periods.

The straw, especially that of the first crop, furnishes an excellent pasturage for cattle, while that left after the usual mode is good for nothing.

The practical knowledge and attention necessary are extremely simple, and within the capacity of minds the most ordinary, so as easily to render their adoption possible by every planter in your country.

The chemical means by which I stimulate the vitality of the rice, and which serves to determine in it an increase of heat, are very cheap. They are more than sufficient to repair the loss of productive capacity which the soil would endure in furnishing a double crop.

You are aware, sir, that far from impairing the value of

land, science has proved rice to be a plant which actually improves the soil that produces it.

It remains for me now to add as to the sum I would demand for the introduction of my system in America, although it would be very difficult for me to state it at this moment, yet I am convinced that this could offer no obstacles to the enterprise. America is too powerful and too generous to hesitate in obtaining what she recognizes to be of great utility, and I, in my turn, should be too happy to place my humble services at her disposal. It is, therefore, in my opinion, beyond a doubt, that as soon as you may be authorized to make me an offer, we may easily come to an understanding.

THE above reminds us of Mr. Comstock's "*Terra Culture*"—a humbug that has been pressed upon public attention as a *secret* worthy of the patronage of Congress and State Legislatures, by the purchase of the same.

If SIGNOR GERMANO LATTIS wished to sell his *nostrum* to the American Government through Mr. DeLeon, Consul at Alexandria, he should have avoided writing any such letter as the above, or at least, its publication in the United States. He says:—"The *chemical means* by which I stimulate the vitality of the rice, and which serves to determine in it an *increase of heat*, are very cheap. They are more than sufficient to repair the loss of productive capacity which the soil would endure in furnishing a double crop."

The secret appears to consist in knowing some "cheap chemical means" which will evolve "heat" in the tissues of rice plants; which "heat," it is falsely assumed, is so much better, and more agreeable to vegetable growth, than solar heat, that the plant will organize as much of its food, whether present or not, in two months as it would in three without the aid of this super-natural chemical stimulant! This simple statement shows that SIGNOR GERMANO LATTIS knows little or nothing of vegetable physiology in its present advanced condition. Two crops of rice may be grown in a year in Egypt as two of corn are grown in Texas; but in neither case is the result attained by any "increase of heat" generated by "chemical means" artificially applied. Any such pretence is a fraud, and it can only be successful to the extent of popular credulity and ignorance of chemistry, and the way in which all plants grow. Let us suppose, for illustration and comparison, that it were entirely practical permanently to raise the temperature of the soil of a rice field, water and atmosphere, (for the two latter would certainly cool the growing plants if not warmed) during the whole time that intervenes from the sowing or planting of the seed, to the maturity of the crop. Will this virtual change of climate render a cooler to a warmer condition, shorten the time in

which a tropical cereal will perform all its vital functions? Our common maize or corn is a tropical or semi-tropical plant, in a state of nature; and in that respect resembles rice. Take corn from Lower Canada where it develops a ripe crop in from 70 to 90 days, to the hottest part of Louisiana. Will the warmer soil, and atmosphere of the "Sunny South" permit one to expect that Canada corn planted in a sugar-cane climate will be ready to harvest in 35 or 45 days after the seed is put into the ground? Will any acclimation of Northern seed corn at the South bring it to maturity in a less time than it is grown in Canada, where it is said to ripen sometimes in two months from the time of planting?

We know not what influence Canada winters may have on maize and other plants; but the transition from severe cold in winter to the warmth of spring appears to have a remarkable effect on the germination of seeds and the growth of plants—quickenning all their vital processes, as though nature was in a hurry to bring her vegetable offspring to the earliest possible maturity, before the return of Frost and Ice in early autumn. Where winter is unknown in its common Northern aspects, and where the warmth of a Northern summer extends through nine or ten months in a year, nature is in no such hurry to drive vegetation at a rapid rate; and Canada corn, instead of ripening in 70 days from the planting of the seed, soon learns to take 140 days in Louisiana to accomplish that object.

Conceding, as all must, that both vegetable vitality and animal life adapt themselves, more or less, to changes in soil and climate, they yield, nevertheless, very little to any quack nostrums designed to stimulate "vitality" without adequate feeding. Manuring cereals and all other grasses is the true way to strengthen and hasten their growth; and this is no secret. But the idea of getting two crops of rice by the "heat" evolved from any mineral or vegetable manure, needs the confirmation of repeated experiments in this country before its soundness can be admitted. SIGNOR GERMANO LATTIS says:—"You are aware, sir, that far from impairing the value of land, science has proved rice to be a plant which actually improves the soil that produces it."

If such were the fact in reference to rice, experience in its cultivation, not science, could alone prove the truth of the statement. Land cultivated in rice and irrigated in some way with fertilizing water, may gain from this source more of the elements of crops than it parts with, and thus increase in fruitfulness. But the statement as made above, without qualification, is obviously an error.

L.

GEOLOGICAL AND AGRICULTURAL TEXT-BOOKS.

Daniel Lee, M. D.:

DEAR SIR—You are aware that numbers of your readers look with great interest to your recommendation of Geological Text-Books, in the February number of the *Cultivator*. I endorse your recommendation of Dr. HITCHCOCK's work, as well as the great works of Sir CHARLES LYELL—"Manual of Elementary Geology," and his Principles of Geology. I thought, however, that I would call your attention to the concluding remark made by an able reviewer of TOUMBEY's Geology of South Carolina, to the Boston Natural History Society. "Upon the whole, I do not know where the same amount of valuable practical information can be obtained in the same compass." I quote from memory; the Review was published in the *American Journal of Science and Art*, about five years ago. One could scarcely pass over this subject without alluding to the amount of information contained in the voluminous Geological Survey of Wisconsin, Iowa and Minnesota, conducted by OWEN, very recently published.

But the great and the only way of mastering the sub-

ject of Agricultural Geology, I have found to be this: Take first, say Prof. SHEPARD's Mineralogy, and obtain a correct knowledge of the chemical constitution of Mineral substances—Quartz, Felspar, Mica, Hornblende, Talc, &c. The number of Minerals most deeply interested in giving character to soil is not very great; nor is it very difficult to learn to distinguish them by their physical appearances. These are indispensables in a practical point of view. Now it becomes easy to learn how these different minerals are united in the different Geological formations. Quartz, Felspar and Mica in the Granite, Felspar and Hornblende in Trap soils, Talc, &c., in Protogine, &c.

And it is very plain, recognizing the Mineralogical and Geological origin of the various soils, their chemical constitution is known at once, and the various changes they undergo, and characters they assume readily understood; their various characters, necessities and adaptations, recognized at a glance. If Albite takes the place of Felspar in any formation, we know at once we have soda instead of potash in the soil.

These remarks are so generally and practically true as regards all the various Hypogene and fossiliferous stratified formations and soils, that the number of soils that really need an analysis to understand them is very limited indeed; and happily so, for their characters vary so often even in the same field, that the latter method becomes quite impracticable. The great concern of agriculture is this proper understanding of the characters of the various soils, and the most, and often the only profitable mode of improving them; for improved land bears the same relation to the success of agriculture, that improved machinery does to profits of manufacturing. There is a general truth that all soils *originally* fertile may be improved readily; those *originally* poor are improved with difficulty. Nature shows, without liability to error, what effect the salts or other elements of soils have upon them. Calcareous soils of fair *physical properties* destitute of organic matter, by denudation, or exhausted from cultivation, if *rested*, improve much more rapidly than those destitute of lime. Lime, if the soil is allowed repose during summer, *generates* vegetable matter. *Lime never can be brought, in our climate, to decompose vegetable matter.* If applied in the condition of oxide or quick lime, it remains in that condition but a few moments. It cannot be preserved in the condition of an alkali in any soil. If it does act as an alkali, it does that much harm to the soil.

The generally small amount of vegetable matters existing in all the soils of warm climates is too speedily exhausted by the decomposing agencies of heat and moisture. But the subject of using lime or other substance to *generate* vegetable matter is a very different affair, and all the failures that have resulted from the application of calcareous manures, in warm climates, have resulted from a misconception of the subject. On the very same Geological or chemical soil farther North, where peat-moss and other cryptogamic vegetables are disposed to obtrude, the applications would have been successful. There are certain formations rich in lime, potash and other inorganic and organic elements, but from position, the condition in which the elements exist, and the physical properties of the soils they are worthless. I only mention those subjects to show that by observing formations, and the effects of salts or other substances derived from minerals, and contained in soils, we obtain a knowledge of their properties, immensely valuable, and to be obtained from no other source. Very respectfully, &c.,

WM. D. KERSH, M. D.

Winsboro, S. C., Feb., 1855.

P. S.—Those acquainted with the Trap formations of this State, or, indeed, with the purely retentive soils anywhere, will understand to what I refer. Wherever Nature

threw the surface of these formations into undulations, or sank the *water-table* otherwise, these are the very best of soils. Here, again, Nature throws light on the subject. It indicates not only *the only means that will succeed at all, but the only means necessary to a perfect restoration*; and I refer to this case as being one in which one of the best of agriculturists, employed by this State as an agricultural surveyor, gave his advice that liming, &c., was the best means of restoring those soils—not knowing the identity of formation and chemical constitution, he failed to perceive the true cause of evil. W. D. K.

REMARKS.—Dr. K. has our thanks for the above equally instructive and suggestive letter. He would render agricultural science an essential service by contributing a series of papers to the pages of the *Cultivator* on the relations which subsist between different soils and the geological formations from which they are derived. That a reasonable amount of lime in a soil greatly favors the luxuriant growth of plants, and thereby rapidly augments vegetable matter on the ground, by the annual decay of said plants, is a fact to which public attention cannot be too often, nor too earnestly called. Before any land can be rich in sound and fruitful *mould*, there are certain conditions precedent of a mineral and geological character, which every farmer and planter ought to understand. These conditions are often wanting; and therefore the best kind of mould is extremely scarce. If any reader desires to know what kind of mould we esteem the best for agricultural purposes, he is informed that it is such as a mass of rotten cotton seed, or of decaying wheat, will form. Pea vines, and Clover yields a rich mould, but not so fertilizing as that from the seeds of cereals. Wild plants, including forest trees, produce organic matter of very unequal value; but in tracing forest trees and smaller plants back to their parent soils and subsoils, and these back to their true geological age and strata, it is not always clear where the loose earth that forms our hills, valleys and plains came from. The debris of adjacent rocks some times furnishes all, or nearly all of the earthy materials present; but it may happen that the earthy matters have been transported from a great and unknown distance, as "Drift," and deposited above all local rocks and their fragments, however, comminuted. In such cases, no analysis of the lower rocks and minerals in the neighborhood, nor knowledge of the chemical constitution of felspar, mica, hornblende and albite, as suggested by Dr. Kersh, will give an index of the natural resources of the soil. It belongs to another and a distant geological epoch, and one more nearly allied to the *flora* and *fauna* of our own time than those of the older fossiliferous rocks.

It is only by a critical knowledge of fossils that geologists determine the age and origin of the earthy strata exposed to the surface of the ground. If there are no fossils, one can usually ascertain, to his own satisfaction, whether the soil is formed mainly of the debris of rocks *in situ*, or from rocks that exist at a great distance. The transporting agencies by which so much earthy matter has been conveyed hundreds and thousands of miles, are water in primitive oceans, lakes, rivers and glaciers. Icebergs now floating from the North Atlantic into a Southern latitude, bring, imbedded in them, huge rocks and their fragments, besides mud and gravel, which fall to the bottom of the sea when the ice melts. Suppose an island or continent to be elevated from the bottom of the Atlantic by volcanic action, the new earth thus brought up to the genial warmth and light of the sun would be covered with such drift deposits as floating icebergs had brought from the North Sea. The elevation and depression of the earth's crust by volcanic action, co-operating with water, frost, atmospheric gases, electricity, vegetable and animal vitality, have produced mighty revolutions in our planet.

Physical geography and meteorology are intimately

connected with agricultural geology and chemistry. It is impossible to give due weight, in the study of soils, to any set of facts, unless we balance them against other facts that have an equal bearing on the subject under consideration. As yet, our data are quite limited, and we should labor to collect more facts before attempting to generalize them into a matured theory. The South presents an interesting field for geological researches undertaken with a view to develop the latent agricultural resources of the planting States. Whoever shall contribute to this result will render the public an essential service. We must make a well considered effort to increase our professional knowledge, and turn it at once to a practical account; and we trust that Dr. Kersh and others will lend a helping hand to keep this matter constantly before the readers of this journal. L.

"RESCUE GRASS."

MESSRS. EDITORS—I see a controversy going on respecting the Rescue Grass. I tried it last fall, and so far, notwithstanding the unfavorable season, it has performed well. In growth, I am told by one of my neighbors, it resembles his Musquit Grass, but from his description the seed differs *in toto*—then in the first growth there must be a great difference—the Musquit is thin and weakly. The Rescue comes up with a strong spear of a purplish hue; very much like Rye; to which family I am inclined (though no botanist) to believe it belongs. I have but little of it, thinking that at the price it was sold, if a humbug, a gallon was as much as I ought to swallow at a time; but am now inclined to believe it was a good draught. Mine has accidentally been twice depastured by a very self-willed ox; yet, is now of a beautiful dark green, (and has so been through the whole of this dry, cold winter) and from eight to nine inches high. I give you my experience in the matter, which, compared with that of others, may decide the merits of the Grass. Whether mine will fully come up to Mr. IVERSON'S experience, remains yet to be developed.

Respectfully, your obt' servant,

ANDREW C. ARMSTRONG.

New Jackson, Miss. March, 1855.

RESCUE GRASS.—Messrs. Editors—The "Rescue Grass," for the seed of which I paid \$5 per peck, is not as tall as the pen I write with—planted in September in very rich land. My Yellow Clover, cold and dry as has been the winter, is a deep dense carpet of verdure, utterly overwhelming the Coco grass which occupies the same ground with it, and it fully and faithfully keeps it down as long as it lives—till May. J. W. B.

Woodville, Miss., 1855.

GROUND PEAS.—A gentleman residing near this place, informs us that he has dug and measured a sufficient quantity of ground peas to ascertain that they will average 105 bushels to the acre! The land planted is ordinary pine land, on which was put a little manure. The labor bestowed was not more than would be necessary to plant and attend the same ground in cotton.

The nutritious qualities of the ground peas are generally known. They are said by those who have made the experiment, to be superior to corn for fattening hogs, and for that purpose they are raised and fed with less trouble than any other crop. They need not be gathered, but remain good in the ground until March or April. During six months from the first of October to the first of April, hogs may be turned into the field of ground peas and kept as fat as though they had free access to a crib of corn. What farmer in Georgia will hereafter buy Western pork?—*Albany Patriot*.

THE CULTURE OF CORN.

MESSEAS. EDITORS—I propose, with your permission, submitting to your readers' a method of *cultivating corn*, the chief merit of which (if there be any) is a saving of unnecessary work.

Premising that before this reaches the eye of planters, their corn will be in the ground, perhaps already up, I now give the *modus operandi*, viz:

1st. To put the bar of a good turning plow as near as possible to the plant and keeping deep, throw the earth *from it* till you go over the crop. This leaves a bed 8 to 10 inches wide, into which the sun will penetrate and warm the roots; if there be rain it will be readily absorbed where most needed.

2d. Having run but one furrow, at the end of 10 or 15 days put a coulter, or bull-tongue plow in the bottom of it, keeping the horse in the furrow, pass over the entire field. This process will have loosened the earth at least *one foot deep*, slightly moulded the corn, and left the ground mellow, as far as the roots need for a fortnight more, when it will be a foot high, and ready for the

3d "running round," with the mould board to the corn, which will invert the mellow soil, and *mould it well*, going this time two furrows; about ten days later plant your peas, and break the middle out thoroughly, which, in a fair season, will give as a good crop, as the land will bear.

Of course, it is impossible to give directions for all and every kind of soils, and seasons—every planter will reject any usage differing from his own best judgment.

I have found the foregoing to answer well, on a flat surface, clay loam, and if the suggestions benefit a brother farmer, my object will have been accomplished.

Respectfully, M.

Richmond Co., Ga., March, 1855.

WHAT DOES A POUND OF COTTON COST?

The profits of cotton planting are, in our estimation, largely over-estimated. At 8 cents a pound, which may, perhaps, be taken as the average price of cotton, it is a fair business—nothing more. There are individual instances of planters who make a large profit at that price, but for every such instance another can be found, who on the other hand, barely makes a living at the same rate. The laws which govern money-making are the same in cotton planting as in every other legitimate business. Close economy, strict attention to his business, prudence and industry, will, in the end, make a man rich, whether he makes cotton bags or sells calico; whether he tills the earth or plows the ocean, and without these elements he can no more prosper in the one than in the other. There are more fortunes made at planting than at any other business, very probably; but this result is attributable not to the supposed fact that there is more money made at the business than any other, but because planters are, as a class, more economical, and live more at home than any other. It is not to be denied, that our vocation has decided advantages over many other pursuits—its independence, its stability and its security for instance; but it will be found, the world over, that just in proportion as these advantages are sacrificed in any pursuit, no matter what, just in that proportion are the anticipated profits enhanced. The shipping business, for instance, has to encounter more risks, and is proportionally more uncertain than planting, but when its adventures are fortunate, they yield a much larger return than the same amount would if invested in land and negroes. So of banking, so of mining, so of merchandizing, so of every other moneyed pursuit. After all, there will be found a surprising uniformity characterizing the profit and loss account of the various legitimate vocations of life. The advantages and disadvantages, esti-

mated with reference to their profitability, are very evenly balanced, and a choice between them is a matter to be regulated by tastes and talents.

We set out, however, with the assertion that the profits of cotton planting were largely over-estimated, and we return to the question, what does it cost to produce a pound of cotton? There are difficulties in the way of an exact answer to this question, and our estimates will be necessarily approximative, but we think not far out of the way. We shall, of course, represent no one isolated instance, but will base our calculations upon the ordinary operations of the cotton plantation. We shall assume that the average value of a full hand is \$900, and that the unavailable negro property on the plantation, in the shape of young and old negroes, amounts to 33 1-2 per cent. upon this; that is to say, on a plantation where the negro property amounts to \$12,000, the value of the available force will be only \$9,000. In calculating the interest, therefore, upon the value of each hand, we shall add to it 33 1-2 per cent. for the value of the inefficient negroes, because it is a necessary part of the cost of a cotton plantation conducted on the general plan. We shall allow thirty-five acres of land to each hand, twenty five for cultivation, and ten in the woods. The allowance of land, we know, is below the fact generally, for there are few who own less, and a large number own twice or three times as much. We think, however, that the crop should not be charged with a larger proportion of wood land, inasmuch as it is in no way indispensable to its culture. We have taken ten acres of wood land to the hand as sufficient to afford wood, timber and privilege to the plantation. By the returns of last census, the average cash value of farms

In South Carolina was \$5 08 per acre.

In Georgia.....4 19 "

In Alabama.....5 30 "

In Mississippi.....5 22 "

In Louisiana.....13 71 "

making an average in these five States of \$6 70 per acre. The average of cotton lands in Louisiana is not, probably, so high as the figures in the above table, but the average in the other States, we are satisfied, is a low estimate.

The usual rule on cotton plantations is to allow one mule for two hands, and result of our observation is that the average duration of good service that may be expected of a mule, with ordinary plantation treatment, is five years. We shall, therefore, charge the crop with interest on the prime cost of the mule, and 20 per cent. for his wear and tear. In estimating the cost of clothing, hats, blankets, &c, we shall charge each hand with his own customary allowance, and 50 per cent. additional for the inefficient negroes on the plantation. The balance sheet will then stand for each hand:

	Dr.
To int. on 35 acres land a \$6 per acre.....	\$16 41
" " on negro property.....	84 00
" " on one-half cost of mule \$150.....	5 35
To wear of same.....	15 00
To clothing, &c.....	8 00
To 50 per cent. on do. for unavailable negroes....	4 00
To expense of overseer.....	15 00
To salt.....	1 00
To iron and blacksmith work.....	3 50
To bagging and rope.....	5 00
To annual expense for tools, wagons, gear, &c....	3 00

\$160 16

Cr. By 2,000 lbs. ginned cotton.

According to the foregoing estimate, the cotton would cost a fraction over 8 cents per lb. It will be perceived that we make no charge for corn and bacon, which, according to the foregoing calculation, is to be raised at home. Thus it is seen that taking, the average production of the

country to be 2,000 pounds of ginned cotton, or four Georgia bales to the hand, and estimating that by a prudent economy the planter produces all his own supplies. It actually costs him 8 cents for every pound of cotton he makes.—*Soil of the South*

TEXAS OAT, ALIA, RESCUE GRASS—EXPERIMENT WITH RYE.

Messrs. Editors—The unprecedented cold and dry weather has so retarded the growth of my Rye that I have thought it advisable not to apply the sickle to it again until it attained its growth or matured its seed; and shall not, therefore, trouble you with another article upon the subject until that period arrives.

I will remark, however, that at present the Rye is from 4 to 10 inches high, and would probably yield 10 lbs. (the row). The grass ("Rescue") is not yet sufficiently high for the grazing of horses or cattle, but would do very well for sheep. The chickens, I find, are beginning to show some partiality for it, it being evidently much more delicate and tender than the Rye ever was, and is probably more nutritious.

In the last number of your *Cultivator*, I find an article from Mr. B. V. IVERSON, the vender of the so-called Rescue Grass seed, in reply to my first communication upon that subject—intending principally to set me aright as to the legitimate or classical name of the grass in question—and calling upon me for the testimony in support of the name which I there choose to give it—"The Texas Oat."

As there is no virtue in a name, I feel as though I should be trespassing upon the columns of your journal as well as the patience of its readers, were I to occupy more than a moment in a reply—made necessary from considerations of courtesy, and in doing so shall bring Mr. I. first upon the stand. In the history of this grass, as given us by Mr. IVERSON, in several of his published communications, he has informed us that Capt. MORGAN SMITH, of Lowndes county, Alabama, first introduced the seed into this country, and that from him he indirectly obtained his—and that he called it the "Texas Oat," (see his reply to "Tatler," November (1854) number of the *Soil of the South*, page 324,) but does not give its history in Capt. S's words any further, as to its origin; although he says: "I have heard Capt. S. state how he received his first start of it" (?)

That its origin is traceable to Texas, when taken in connection with this history, is clear from the testimony of the Hon. W. L. YANCY, of Ala., "Agricola" and "Tatler"

In the *Farmer and Planter*, (November (1854) number, page 298,) W. L. Y. states, "That several years since, one of Capt. SMITH's neighbors removed to Texas, and that Capt. S. dropped into the hand of the emigrant's son, who was named after him, a twenty-dollar gold piece. In a short time afterwards, however, there came a letter from the young Texan, containing a few seed, which resembled our oat seed, in all but size." "Agricola" says, (November (1854) number of the *Southern Cultivator*, page 37,) "Mr. GILMER, of Red River. (who is a nephew of Capt. S's wife) brought the oat from Texas and gave it to his uncle." In the October (1854) number of the *Soil of the South*, page 295, "Tatler" says, "The seed were sent from Texas as the Texas Oat to Capt. M. SMITH, of Lowndes county Alabama."

The only discrepancy in these statements is as to its derivation—certainly not material. The seed, therefore, beyond a doubt, came from Texas and was called by Capt. SMITH, "Texas Oats." This evidence may not be conclusive to Mr. IVERSON; but it is something beyond the mere "ipse dixit" which he taunts me with.

In explanation of Mr. I.'s surmises, noted in his reply, as to who I am, I will relieve his suspicions by informing

him that that communication was the first article I ever wrote touching this grass, and that I am not "unfriendly either to him, personally, or his grass." But was actuated from the best of motives in making the experiment—founded upon his own laudations of its merits—some few of which I will quote. In the August (1854) number of the *Soil of the South*, page 624; he says: "It is never injured by our severest cold; which stands our summer's heat; which is neither injured nor retarded by heavy rains, overflows or ordinary drouths; and will do well in any kind of soil in the South," &c., &c. Again, in the September (1854) number of the same journal, page 649. "I do, in all candor, state, once for all, that every word I said about it is true." In another sentence—"It out grows Millet or Lucerne; it will (if sowed in the last of September) be ready to graze horses, mules, cattle, sheep, goats, hogs and chickens, from November to June; it will then (stock being withdrawn and the ground rich) yield as much hay, per acre, as the best Northern article, in quantity, quality and weight, &c., &c., &c."

But, to return to his reply to my article, he says: "I will say, however, that the fall and winter, so far, has been entirely too dry for it; as an evidence of this, I find my grass now not over 20 inches high, while, at the same period last year it was over 30 inches in the same ground." In reply to this statement, I have only to remark that it must be grown in a garden, or on some other rich plat of ground.

The soil in which mine is planted (and they are genuine seed, unless he sold a spurious article, which opinion I will not entertain) would grow, with ordinary seasons, from 18 to 20 bushels corn per acre, being certainly the best soil for testing its value as a *renovator* (also claimed for it) of poor land.

As winter food for stock it has been entirely worthless to me; and it now remains to be seen what is its relative value to Rye, in yield of hay, or green matter for turning in as a fertilizer.

I sowed down (in drills) a square in my garden—say 30 by 30 feet square—in Rye, about the first of September last, which has furnished a daily supply of 10 to 15 lbs. of green food to one cow ever since the first of December, and promises to last at least two weeks longer. The drills are about 6 inches wide, and rows about 18 inches apart.

Barly is more nutritious than Rye.

ALGERNON.

March, 1855.

HYDROPHOBIA IN A HORSE.—A correspondent of the *Mark Lane Express*, dating from Whetstone, relates the following case:

Six or seven weeks ago I had a valuable cart mare bitten by a strange dog. My man was in the chaff house, and he was aroused by a sudden rearing, plunging, and unusual noise; he immediately entered the stable, and thought he saw a small dog jump out of the manger and leave the stable; he thought this must have frightened the animal, as it was dusk. I told him to bring it out to the light, when we observed three or four long scratches or incisions just deep enough to draw blood; an uneasy thought crossed my mind at the moment, but it was soon forgotten, and it was only last week that I was pleasing myself that the mare was improving in condition. On Monday last she appeared to have a sore throat. I sent for the farrier, who administered some remedy, and ordered fomentation, which was very frequently applied. She appeared something better on Thursday, morning, but towards evening became worse, and eventually quite rabid—staring and shivering at the sound of water, and snapping at everything within reach; and at last we found it necessary to kill her.

PREMIUM LIST FOR THE TENTH ANNUAL FAIR OF THE SOUTHERN CENTRAL AGRICULTURAL SOCIETY, TO BE HELD IN ATLANTA, GA.,

On the 10th, 11th, 12th, 13th, 14th and 15th days of September, 1855.

FIELD CROPS.

1. For the largest crop of Cotton produced upon two acres of *upland*, with the mode of cultivation, the amount and kind of manure used, the period of planting, the number of times plowed and hoed, the kind of Cotton—the land to be measured and the Cotton weighed in the presence of three disinterested and reliable witnesses, with certificate from them, pitcher, \$50
 2. For the largest crop of Cotton produced upon two acres of *low land*, (the same requisition as upon two acres of upland,) 50
 3. For the largest crop of Pea Vine Hay, raised on two acres, one bale to be sent as a sample, with a certificate of quantity made, silver cup, 10
 4. For the largest crop of Native Grass Hay, raised on 2 acres, the same as above, 10
 5. For the largest crop of Foreign Grass Hay, raised on 2 acres, the same as above, 10
 6. For the largest crop of Corn grown upon 2 acres of upland; the period of planting, the mode of cultivation, kind of corn, times plowed and hoed, the amount and kind of manure applied—the land and corn measured in the presence of three disinterested and reliable witnesses, with their certificates—a silver pitcher worth 50
 7. For the largest crop of Corn grown upon two acres of *low land*, (requisition as upon upland Corn) 50
 8. For the largest crop of Wheat (drilled or broadcast) grown upon two acres of land, not under 60 pounds per bushel; the land and Wheat to be measured, and under the same requisition in all things as above, 25
 9. For the largest crop of *low land* Rice, on one acre, 25
 10. For the largest crop of Oats, kind, &c., raised per acre, 20
 11. For the largest crop of Rye, kind, &c., raised per acre, 10
 12. For the largest crop of Barley, kind, &c., raised per acre, 10
 13. For the largest crop of Sweet Potatoes raised per acre, one eighth of an acre to be dug, and certificates of the yield by disinterested persons furnished, 20
 14. For the largest crop of Irish Potatoes raised per acre, 20
 15. For the largest crop of Turnips raised per acre, 10
 16. For the largest crop of Ground Peas, or Pindars, per acre, 10
 17. For the largest crop of Field Peas raised per acre, 10
 18. Best box of Chewing Tobacco, Georgia raised, \$5
 19. Best box of Cigars from Georgia raised Tobacco, 5
 20. Best sample of Georgia raised Smoking Tobacco, 5
 21. For the greatest quantity of Corn produced on an acre of land by *irrigation*, with the mode of cultivation, time of planting, irrigation, &c., 25
- Exhibitors of all the above crops must *state* in writing, in full, to the Secretary, all the requisitions as laid down for Corn, Cotton, &c., as above, when the articles are entered upon his books for exhibition; with the witnesses' certificates for the measurement of lands and pounds, and bushels per acre; without which the Judges will be required to withhold their awards, and exhibitors not complying with these requisitions will not be allowed to compete for the Premiums of the Society.

CROPS BY BOYS UNDER SIXTEEN YEARS OF AGE.

1. For the largest quantity of Indian Corn grown by any white boy under 16 years of age, upon an acre of land, a patent lever silver Watch, 25
 2. For the largest quantity of Cotton produced by any white boy under 16 years of age upon an acre of land—patent lever silver Watch, 25
- The rules in relation to field crops to be complied with.
- The rules of field crops to be complied with.

SAMPLES OF FIELD CROPS.

1. The best variety of Bread Corn, with two bushels as sample, \$10
 2. Best variety of Corn for stock, two bushels as samples—tested by weight, 10
 3. Best variety of Wheat, with a bushel of grain as sample, 5
 4. For the best variety of Sweet Potato, sample of two bushels, 5
 5. For the best variety of Field Peas, sample of one bushel, 5
 6. Best variety of upland Cotton, two stalks as samples, 5
 7. Best variety of Sea Island Cotton, with two stalks as samples, 5
 8. Best bushel of Rice, 5
 9. " " " Oats, 5
 10. " " " Rye, 5
 11. " " " Barley, 5
 12. Best bushel of Irish Potatoes, 5
 13. Best variety of grass seeds adapted to the South for Hay or Grazing, 10
- Exhibitors of crops, must give in writing to the Secretary a full account of each crop offered—its adaptation for profitable cultivation, &c. Exhibitors of Hay, must give the mode of cultivating, curing, harvesting, &c.

COTTON BALES.

- 1 For the best 20 bales of Upland Cotton, \$20
 - 2 " " " 10 " " " " 15
 - 3 " " " 5 " " " " 10
 - 4 " " " 1 " " " " 5
 - 5 " " " 5 " " Sea Island Cotton, 20
 - 6 Best bale of (400 lbs.) Sea Island or Black Seed Cotton raised on upland, 20
- The Cotton must be on the Fair Ground during the Exhibition, to claim the premium.

CATTLE.

FIRST CLASS.—DEVONS.

[In all cases, purity of blood, in both sire and dam, as traced back to the herds of established English or American breeders, or as found in the Herd Book for North Devons, and without this an animal cannot compete in this class.]

1. For the best Bull 3 years old, or upwards, \$20
2. " " 2d best Bull 3 years old, or upwards, Medal
3. " " best Bull 2 to 3 years old, \$10
4. " " Bull 1 to 2 years old, 5
5. " " Cow 8 years old, or upwards, 10
6. " " 2d best Cow 3 years old, or upwards, Medal
7. " " best Heifer 2 to 3 years old, \$5
8. " " " 1 to 2 years old, 5
9. " " Bull Calf 6 months old, or upwards, Medal
10. " " Heifer Calf 6 mos. old, or upwards, Medal

SECOND CLASS.—DURHAMS, OR SHORT HORNS.

[In all cases purity of blood in both sire and dam, as traced back to the Herds of established English or American breeders, or as found in the English or American Herd Books for Short Horns, and without this an animal cannot compete in this class.]

1. For the best Bull 3 years old, or upwards, \$20
2. " " 2d best Bull 3 years old, or upwards, Medal
3. " " best Bull 2 to 3 years old, \$10
4. " " Bull 1 to 2 years old, 5
5. " " Cow 8 years old, or upwards, 10
6. " " 2d best Cow 3 years old, or upwards, Medal
7. " " best Heifer 2 to 3 years old, \$5
8. " " Bull 1 to 2 years old, 5
9. " " Bull Calf 6 months old, Medal
10. " " Heifer Calf 6 months old, Medal

THIRD CLASS.—AYRESHIRE.

1. For the best Bull, \$10
2. For the best Cow, 5

FOURTH CLASS.—ALDERNEYS.

1. For the best Bull, \$10
2. For the best Cow, 5

FIFTH CLASS.—KERRY.

1. For the best Bull, \$10
2. For the best Cow, 5

SIXTH CLASS.—GRADES OR MIXED BLOOD.

1. For the best milking Cow 3 years old, or upwards, \$10
2. " " Heifer 2 to 3 years old, 5
3. " " Heifer 1 to 2 years old, 5
4. " " Heifer Calf 6 months old, Medal

SEVENTH CLASS.—NATIVE CATTLE.

1. For the best milking Cow 3 years old, or upwards, \$10
2. " " Heifer 2 to 3 years old, 5
3. " " Heifer 1 to 2 years old, 5
4. " " Heifer Calf 6 months old, Medal

IMPORTED CATTLE.

[In all cases where the word imported is used, it is understood the animal must be brought from beyond the United States.]

1. For the best imported Bull of any breed, \$20
2. " " " Cow " " 10

WORKING OXEN.

1. For the best single yoke, working qualities to be tested on the Fair Ground, \$20

FAT CATTLE.

1. For the best lot of fat Steers (not less than five), \$10
2. " " " single fat Steer, 5
3. " " " fat Cow, Medal
4. " " " spayed Heifer, or Cow, \$5

HORSES.

FOURTH CLASS.—MORGAN, CANADIAN AND IMPORTED HORSES.

1. For the best *Morgan Stallion*, with pedigree, and certificate of his *purity* on the side of sire and dam, where and by whom raised: [If his history and certificates are not entirely satisfactory, the premium will not be awarded, and the judges required to reject him.] \$20

JACKS AND JENNETTES.

Imported.

1. For the largest and best imported Jack, with certificates, approved by the Society, \$20
2. For the 21 best imported Jack, Medal
3. " " best imported Jennette, with certificates approved by the Society, \$10
4. For the 2d best imported Jennette, Medal

Southern Raised.

1. For the best and largest Jack, \$20
2. " " " Jennette, 10
3. " " " Jennette, with colt by her side (Georgia raised), 10

MULES.

Georgia Raised.

1. For the best pair of Mules, \$20
2. " " second best pair of Mules, Medal
3. " " best single Mule, \$10
4. " " second best single Mule, Medal
5. " " best Mule 2 years old, 5
7. " " " 1 5

Southern Raised.

1. For the best pair of mules, \$10
2. " " second best pair of Mules, Medal

SHEEP.

FIRST CLASS.—MERINOS.

1. For the best pen, consisting of Buck, Ewe and lamb or lambs, \$10
2. For the second best pen, consisting of Buck, Ewe and lamb or lambs, Medal

SECOND CLASS.—MUTTON SHEEP, SOUTH DOWNS.

1. For the best pen, consisting of Buck, Ewe and lamb or lambs, \$10
2. For the second best pen, consisting of Buck, Ewe and lamb or lambs, Medal

THIRD CLASS.—LONG WOOLS.

1. For the best pen, consisting of Buck, Ewe and lamb or lambs, \$10
2. For the second best pen, consisting of Buck Ewe and lamb or lambs, Medal

FOURTH CLASS.—NATIVE AND GRADES.

1. For the best pen, consisting of Buck, Ewe and lamb or lambs, \$10
2. For the second best pen, consisting of Buck, Ewe and lamb or lambs, Medal
3. For the best samples of Wool on each of the above classes, not less than 3 fleeces in one package, \$5

SIXTH CLASS.—FAT MUTTON.

1. For the best pen of Fat Mutton, not less than five, \$5
2. For the second best pen of Fat Mutton, not less than five, Medal

CASHMERE, THIBET, OR PERSIAN GOATS.

1. For the best Buck and Ewe, (thorough bred), \$10
2. " " best Buck and Ewe, (grades), 5

SHEPHERD'S DOG.

1. For the best Dog, with evidence of training, \$5
2. " " " " " " 5

SWINE.

FIRST CLASS.—GRAZERS.

1. For the best Boar, \$5
2. For the best Sow, 5

SECOND CLASS.—BERKSHIRE.

1. For the best Boar, \$5
2. For the best Sow, 5

THIRD CLASS.—BLACK ESSEX.

1. For the best Boar, \$5
2. For the best Sow, 5

FOURTH CLASS.—FAT HOGS.

1. For the best pen of Fat Hogs, of either of the above classes, not less than five in a pen, \$5
 2. For the largest and fattest Hog, (Georgia raised), 5
- Exhibitors of Cattle, Sheep and Swine will be required, under a rule of the Society, in all cases, to deposit with the Secretary, when the animal is entered for exhibition, a full written statement of the history of the breed and age of his animal, when practicable; the system of feeding and fattening; the food consumed, in quality, quantity and value; date when the feeding commenced; the weight of the animal when entered for feeding, and its increased weight up to the day sent for exhibition.

POULTRY.

1. For the largest and best variety of Barn Yard or Domesticated Fowls of all kinds, exhibited by one person, \$20

PORK, BACON AND BEEF.

1. For the best half-barrel Pickled or Mess Pork, \$5
 2. " " " Beef, 5
 3. " " Bacon Ham, regardless of age, 5
 4. " " half doz. Bacon Hams regardless of age, 5
 5. " " half doz. Sides, 5
 6. " " " Shoulders, " 5
 7. " " " cured Mutton Hams, 5
- Exhibitors must state in full to the Secretary the mode of pickling the Pork and Beef, and curing and preserving the Bacon.

DAIRY.

1. For the best jar of fresh Butter, Georgia made, not less than 10 lbs., \$5
 2. For the best firkin of Butter, 6 months old, not less than 20 lbs., 5
 3. For the best new Cheese, Southern made, 5
 4. " " " " 12 mos. old, 5
- The process of making and preserving the butter and cheese to be given in full, by the exhibitor, to the Secretary as before-mentioned.

HOUSEHOLD DEPARTMENT.

1. For the best jar of leaf Lard, 30 lbs., \$5
2. " " box of Hard Soap, home-made, 20 lbs, 5
3. " " 10 lbs. of Soft " " 3
4. " " box of Bar " Southern made, 5
5. " " box of Toilet Soap, 5
6. " " box Tallow Candles, dipped, (not less than 10 lbs.), 5
7. For the best box Tallow Candles, mould, (not less than 10 lbs.), 5
8. For the best loaf light wheat Bread, 2
9. " " Corn Bread, 5
10. " " half bushel dried Apples, Pears and Quinces, each 5
11. For the best drum of Dried Figs, Southern raised, and sample of preserved Dates and pickled Olives, each, 3
12. For the best sample of Southern made Olive Oil, 5
13. " " and largest exhibition of Jellies, Preserves, Pickles, Jams, Catsups, Syrups, Cordials, &c., made and exhibited by the same individual, 10
14. For the best box Soda, Lemon, Butter, Sugar and Wine Biscuit, manufactured from Southern flour, each, 3

SOUTHERN DOMESTIC MANUFACTURES.

1. For the best pair Woolen Blankets, \$10
2. " " " Cotton, 10
3. " " 10 yards (negro) Woolen Cloth, 5
4. " " 10 yards " Carpeting, 10
6. " " Hearth Rug " 3

7.	For the best Rag Carpeting,	\$5	11.	For the best Child's Hat or Cap,	\$8
8.	" " 10 yards of Hair Carpeting,	5	12.	" " Child's Specer or Sack,	2
9.	" " Coverlet of wool or mixed,	5	13.	" " woven Counterpane (Georgia made),	5
10.	" " Cotton Comforts for negroes,	5	14.	" " Cradle Quilt,	5
11.	" " pair of Woolen Socks or Stockings,	1	15.	" " Reticule,	2
12.	" " 10 yards Jeans, worn in,	5	16.	" " Purse,	1
13.	" " 10 yards home-made Linen Shirting,	5	17.	" " Goggles,	2
14.	" " " " " Diaper,	5	18.	" " Hose, long or short,	5
15.	" " " " " Jeans, cotton,	5	19.	" " Child's Socks,	1
16.	" " Coverlet of cotton, or mixed,	5	20.	" " Lamp or Vase Mat,	2
17.	" " Socks or Stockings, of linen,	1	<i>Spanish and American Needlework.</i>		
18.	" " " " " of cotton,	1	1.	For the best Collar and Chemisette,	Medal
19.	" " pound of linen Sewing Thread,	1	2.	" " Underleaves,	Medal
20.	" " " " " cot on	1	3.	" " Handkerchief,	Medal
21.	" " 10 yards Flannel,	5	4.	" " Berthe Cape,	Medal
22.	" " " " Georgia made Gingham,	5	5.	" " Child's Dress,	Medal
23.	" " " " " Plain	5	<i>Sicilian or similar Fabrics.</i>		

Raised Worsted Work—Framed Tapestry Work, &c.

1.	For the best Pillow Cover (raised work),	Medal	1.	For the best Bonnets, Hats or Caps, each,	Medal
2.	" " Table do.,	Medal	<i>Wax and Shell Work.</i>		
3.	" " Chair do.,	Medal	1.	For the best Wax Work in fruit and flowers,	Medal
4.	" " Ottoman Cover,	Medal	2.	" " " " specimen of Shell Work.	Medal
5.	" " Footstool do.,	Medal	<i>Southern Manufactures Other Than Domestic.</i>		
6.	" " Hearth Rug,	Medal	1.	For best bale Onaburgs, 8 ounces to the yard,	\$10.
7.	" " pair of Fire Screens,	Medal	2.	" " " " Shirting,	10
8.	" " Lamp or Vase Mat	Medal	3.	" " " " Sheetting,	10

Embroidry in Silk Floss, Chain-Stitch or Braid.

1.	For the best Lady's Dress,	Medal	4.	" " " " Kerseys,	10
2.	" " " " Shawl,	Medal	5.	" " " " Stipes,	10
3.	" " " " Mantle,	Medal	6.	" " " " Flims,	10
4.	" " " " Scarf or Neck Tie,	Medal	7.	" " " " Bed Ticking,	5
5.	" " " " Apron,	Medal	8.	" " best double Cotton Mattress,	5
6.	" " " " Vest,	Medal	9.	" " " " Shuck	5
7.	" " Child's Dress,	Medal	10.	" " " " Moss	5
8.	" " " " Sack or Spenser,	Medal	11.	" " " " Hair	5
9.	" " " " Cloak,	Medal	12.	" " best coil Hemp Rope, Southern manufacture,	5
10.	" " Lady's Reticule,	Medal	13.	" " " " Cotton	5
11.	" " Fire Screens,	Medal	14.	" " " " Bar Grass Rope	5
12.	" " Portfolio, (embroidered)	Medal	15.	" " " " Flax Lines,	5

Knitting, Netting or Crochet in Crewel or Silk.

1.	For the best Piano Cover,	\$10	16.	" " best and greatest variety of Cotton Cordage,	5
2.	" " Table do.,	5	17.	" " " " Wrapping Twine,	5
3.	" " Ottoman Cover,	3	18.	" " " " sample Cotton Belting,	5

SILK.

1.	For the best specimen of Sewing Silk,	\$2	20.	" " bale Cotton Yarn, comprising all the Numbers,	10
2.	" " " " of Reeled	2	21.	" " " " piece of Bagging, made of Cotton,	10
3.	" " " " half bushel of Cocoons,	2	22.	" " " " " made of Long or Southern moss,	5
4.	" " " " Stocking or half hose,	2	23.	" " " " piece Cassimere, Southern manufacture,	10
5.	" " " " Handkerchief or Shawl,	2	24.	" " " " " Plains,	5
6.	" " " " specimen of Silk and Wool Cloth, 3 yds,	5	25.	" " " " " Satinets,	5
7.	" " " " " Cotton	5	26.	" " " " " Linseys or Kerseys, Southern man-	5

NEEDLE, SHELL AND FANCY WORK.*Knitting Netting and Crochet in Thread.*

1.	For the best Collar and Chemisette,	Medal	31.	" " bale of Blankets, Southern wool and of	20
2.	" " " " Underleaves,	Medal	Southern manufacture,		
3.	" " " " Handkerchief,	Medal	32.	For best piece of Broadcloth,	20
4.	" " " " Morning Cap,	Medal	33.	" " " " Carpeting,	20
5.	" " " " Infant's Cap,	Medal	MUSICAL INSTRUMENTS.		
6.	" " " " Infant's Waist,	Medal	1.	Best Piano, Southern made,	\$20
7.	" " " " Child's Hat,	Medal	2.	" " Violin,	5
8.	" " " " Child's Socks,	Medal	3.	" " " " Flute	5
9.	" " " " Cradle Quilt,	Medal	FRUITS.		
10.	" " " " Counterpane,	Medal	1.	For best 100 Oranges, open culture, grown at the	\$5
11.	" " " " Fringe and Lace,	Medal	South,		
12.	" " " " "Tidy,"	Medal	2.	For best one dozen Pine Apples,	5
13.	" " " " Bonnet,	Medal	APPLES.		
14.	" " " " Cape (Berthe),	Medal	1.	For best and largest variety of Table Apples,	\$10
15.	" " " " Shawl,	Medal	1.	" " " " collection of Southern Seedling	10

French Needlework.

1.	For the most beautiful Collar and Chemisette,	Medal	2.	For best late Seedling Apple, for all purposes, with	5
2.	" " " " Underleaves,	Medal	description of the Tree, history of its origin, keep-		
3.	" " " " Handkerchief,	Medal	ing, &c., or dozen Apples to be exhibited, (vari-		
4.	" " " " Morning Cap,	Medal	ety not before exhibited.)		
5.	" " " " Shawl,	Medal	PEARS.		
6.	" " " " Mantle,	Medal	1.	For best and largest variety of Pears,	\$10

Patch Work in Cotton, &c.

1.	For the best patch work Quilt in Cotton,	\$5	2.	For best and largest collection of Southern Seedlings,	5
2.	" " " " " " " Silk,	5	3.	For best single Seedling, for all purpose, with de-	5
3.	" " " " raised work Quilt,	5	scription of the Tree, history, &c., half dozen		
4.	" " " " imitation of Marseilles,	5	specimens to be exhibited, (variety not before		
5.	" " " " Counterpane,	5	exhibited),		
6.	" " " " Cloak and Mantle,	5	PEACHES, GRAPES, &c.		
7.	" " " " Shawl,	5	1.	For best collection Seedling or others, process of	\$1
8.	" " " " Scarf for neck,	5	keeping, &c.,		
9.	" " " " Pair of Underleaves,	5	2.	For best collection of Quinces,	5
10.	" " " " Head Dress,	5	3.	" " " " Native Grapes, with history	5

of keeping, preserving, &c.,

4. For best Foreign Grape for table, \$5
5. " " for Wine, 5
6. " dozen specimens of the Lime, Lemon, or other Southern fruits not named above, each, 5

FRUIT TREES, &c.

1. For the largest collection of Southern Seedling Apple Trees, each variety labelled, with specimens of the fruit, \$10
2. For the largest and best collection of Peach Trees, budded or grafted, each variety described and labelled, 10
3. For the largest and best collection of Pears, described and labelled as above, 10
4. For the greatest variety and best collection of Strawberry Plants, 5
5. For the greatest variety and best collection of Raspberry Plants, 5
6. For the best 2 dozen plants Rochelle Blackberry, 5

HEDGE PLANTS.

1. For the largest collection of O-age Orange, or other Plants, (Georgia raised) with a description of the best method of planting, trimming and training the hedge, \$10
2. For the best collection of Osier or Basket Willow Plants or Cuttings, 10
3. For the best basket of Southern grown Osier Willow, 5
4. For the best Basket, Mat, or other work of Wire Grass, 5

FLORICULTURE.

AMATEUR LIST.

1. For the best collection of Green House Plants, exhibited by one individual, \$10
2. For finest collection of Dahlias, 5
3. " best " " Roses, 5
4. " " " " Phloxes, 2
5. " " " " Verbenas, 2
6. " " " " Asters, 2
7. " largest " " Flowers, 2

HORTICULTURE.

1. For best and greatest variety of Garden Vegetables raised by one individual, (or in proportion according to value,) \$10
2. For a new and valuable variety of Vegetable, with evidence of its excellence or utility, 3
3. For best and largest collection of Garden Seeds, not less than twenty approved varieties, raised and exhibited by one individual, and best for Southern Horticulture, a premium Cup worth, 10
4. For the best specimen of prepared Arrow Root, 5

MECHANICAL PREMIUMS.

SOUTHERN FARMING IMPLEMENTS.

1. For the best St. e Hail Plow, \$10
2. " " Double mould board do., 10
3. " " Cast mould board one horse do., 10
4. " " " " two " do., 10
5. " " Wrought Iron one horse mould board Plow, 10
6. For best Wrought Iron two horse mould board Plow, 10
7. " " Subsoil Plow, 10
8. " " Cotton Scraper Plow 5
9. " " Sweep, 5
10. " " Toothed Harrow, 5
11. " Turning Plow on Rooter Stock, 10
12. " one horse plow harness, consisting of bridle stuffed Collar, Traces, back and belly Bands, to avoid hurting the back, or shoulders; to be awarded only after proof of efficacy. 10
13. Best Southern Road Wagon, 10
14. " " two horse Wagon, 10
15. " " Dump Cart, one horse, 5
16. " " Ox Cart, 5
17. " " Ox Yoke, 2
18. " " Farm Gate and Hinges, 5
19. " " moveable Horse Power, 10
20. " " Thresher, 10
21. " " Fan, 5
22. " " Straw Cutter, 5
23. " " Corn and Cob Crusher, 5
24. " " Corn Sheller, 5
25. " " Grain Cradle, 3
26. " " Vegetable Cutter, 3
27. Best Cotton Gin, open to the world, 25
28. " Cotton Press, " " 20
29. " Stocked Plow, offered by a slave, with certificates from his master or overseer, 5
30. Best and largest lot of Agricultural and Horticultural Implements, (Georgia made), 20

31. Best Club Axe, \$1
32. " Broad Axe, 1
33. " Drawing Knife, 1
34. " Manure Fork, 1
35. " Portable Work Bench, with full sett of Plantation Carpenter's Tools, 10

CHEMICAL MANUFACTURES, OILS, CEMENTS,

MINERALS, &c.

1. Best specimen cold pressed Castor Oil, \$2
2. " " Linseed, Lard and Cotton seed Oil, each, 2
3. " " bbl of Salt, 2
4. " " bbl. of Spirits of Turpentine, 5
5. " " Rosin, 3
6. " " Tar, 2
7. " specimen of Lime, Gypsum, Water Cement, and Pearl Ash, a barrel of each, 10
8. Best specimen of Southern made Paint, of Southern materials, different colors, mixed, applied and dry, 10
9. Best French Burr Mill Stones, *Southern Manufact.*, 10
10. " Oil Stone, 1
11. " bushel Bituminous and Anthracite Coal, each, 5
12. " collection of Georgia Minerals, 10

MANUFACTURES OF STONE, MARBLE, &c.

1. Best marble Monument and Mantle Piece, each, \$5
2. " and largest exhibition of Stone Ware, 5
3. " Window, Plate and Hollow Glass, 5
4. " specimens of Fire Brick, 3
5. " Georgia Mill Rock for grinding Indian Corn, 10

RECLAIMING LAND.

1. For the best and most economical method, (based on actual experiment) of reactivating the worn-out land of the South, by a system of turning under green crops, liming, Guano, Super-phosphate, or otherwise, \$25
2. For the best Essay on Agriculture, by a pupil of any School or College in the State—Pitcher, 25

FINE ARTS.

1. For best historical Painting, (in oil) connected with the history of Georgia, \$20
2. For best specimen of Animal Painting (in oil) from nature, 20
3. For best specimen of Southern Landscape Painting, from nature, (in oil,) 20
4. For best specimen of Fruit Painting, 5
5. " " " " Fancy " 5
6. " " " " Water Colors, 5

No premium will be awarded in this Department unless the specimens on exhibition are considered really meritorious by competent judges.

SOUTHERN MADE MACHINERY.

1. Best Steam Engine for Agricultural purposes, at work on ground, \$25
2. Best Improved Grist Mill, 10
3. " Plantation Saw Mill, by steam, water or horse power, 20
4. " Railroad Bar Iron, 20
5. " kegs of Nails, from No. 4 to No. 20, a keg of each, 10
6. Best Fire Engine, 10
7. " Lathe for Metal (Southern made,) 10
8. " Lathe for Wood, (Southern made) 5
9. " Bolt Cutting Machine, 10
10. " Screw Plate for plantation use, 5
11. " Gin Saw Filing Machine, 5
12. " Steam Boiler, 10
13. " Rope Twisting Machine, for Plantation use, 10
14. " new improvement in Gin Gearing, (this must be new and an improvement, or the award is not to be given), 10

SOUTHERN MANUFACTURES IN WOOD AND IRON.

1. Best Secretary and Book Case, Southern wood, \$5
2. " Side-board and Bureau, " " 5
3. " Sofa, " " 5
4. " Bedstead, " " 5
5. " Sett fine Chairs, " " 5
6. " " common Chairs, " " 5
7. " Invalid Chair, " " 5
8. " Dining Table, " " 5
9. " Tin or Wire Safe, " " 5
10. " Kitchen Table, with Shelves and Drawers, 5
11. " Window Sash and Blinds, each, 5
12. " Pannel Door, 5
13. " Dozen Cedar, Cypress, Juniper, and Pine Buckets, each, 5

14. " Dozen Cedar, Cypress, Juniper, and Pine Tubs, each, \$2
15. " Nest of Ozier or Willow Baskets, 2
16. " Dozen Broom Corn and Wire-grass Brooms, each, 2
17. " Blacksmith's Bellows, (Southern made) for plantation use, 5
18. " Rifle Gun, (Southern make), 5
19. " Double barrelled Gun, or Fowling piece, do., 5
20. " and argest exhibition of boot and shoe Lasts, 5
21. " Pegs and Bristles, 5
22. " Horn, bone and wooden Buttons, 5
23. " close family Carriage, combining convenience, safety, lightness, (Southern make), 20
24. " Buggy, 10
25. " and largest exhibition of Mechanics' Tools, (Southern made), 10
26. " and largest exhibition of Iron Castings, 10
27. " specimen of Bar and Round Iron, 10
28. " Saw Mill Irons, 5
29. " Grist Mill Irons, 5
30. " set Blacksmith's Tools, 5

MANUFACTURES OF LEATHER.

1. Best and most useful Carriage Harness, \$10
2. " " " " " " 5
3. " " " " " " 5
4. " " " " " " 5
5. " " " " " " 5
6. Best dozen Brogans, 10
7. " pair of Boots, 5
8. " half dozen pair gents' Shoes, 5
9. " " " " " " 5
10. " Travelling Trunk and Valise, each, 5
11. Largest and best collection of Southern Tanned Leather, consisting of Kip, Calf, Sole and Harness, 20
12. Best Side Upper, Sole and Harness Leather, each, 2
13. " half dozen Calf Skins, 5
14. " side of oil dressed Whang Leather, 5
15. " dozen dressed Sheep Skins, 5
16. " " " " " " 5
17. " specimen of plantation Tanned Leather, for plantation uses, 5

PLOWING MATCH.

1. For best Plowing by white man, \$5
2. " " " " slave, 5
3. " " " " white boy, 13 to 16 years old, 5
4. " " " " negro " " " " 5

The Plowing Match will come off during the Fair. Grounds will be prepared for the same and entrance open to horses, mules and oxen.

Judges in this department will be governed in their awards by the depth and width of the furrow-slice turned by the plow of each competitor, and the time employed to complete his work.

Plows must be deposited at the Secretary's office on the first day of the Fair. Those of Southern invention and manufacture, if of equal merit to have precedence.

As many articles of merit in the various departments of labor, art, which are not specially provided for in the Premium List, may be presented for exhibition and premium: a committee on miscellaneous articles will be appointed to examine and report upon, and award premiums upon all such articles worthy of premiums.

The Society have offered premiums to the amount of \$4,000, embracing nearly everything valuable in Agricultural and Mechanical Industry, Art, Science and Taste. The Premium List will be furnished by application (postage paid) to the Secretary.

REGULATIONS OF THE FAIR OF 1855.

Individuals who will pay twenty-five dollars shall become life members of the Society, which entitles them, with the immediate members of their families, to admission at all times to the Fair Grounds—to all future publications of the Society, and to compete for premiums without charge.

Individuals paying two dollars shall be members for one year, and exhibit articles without further charge, and have free access to the Fair Grounds during Fair week.

On Tuesday and Wednesday of Fair week—the days for examination by the Judges—the public will be admitted for \$1; Thursday, 50 cents; Friday, 25 cents. Tickets to be delivered to the gate-keeper on entering.

Children under twelve years of age will be admitted at half price.

The pupils of charitable institutions will be admitted free.

All Editors in the Southern States are invited.

Other State Agricultural Societies and Institutes are requested to send Delegates to the next Annual Fair of this Society, to be held at Atlanta, September 12th, 13th, 14th and 15th, 1855. Such Delegates will be presented with a badge which will entitle them to the privilege of the Grounds.

RULES FOR EXHIBITORS.

SPECIAL NOTICES.

All exhibitors at the Fair must pay \$2 and have their animals or articles entered at the Secretary's office before taking them into the enclosure. All who intend to compete for the premiums of the Society, must have their articles on the ground and entered at the Secretary's office, at or before 5 o'clock, on Saturday evening, the 8th of September, without fail; so that they may be arranged in their respective departments, and in readiness for examination by the Judges on Tuesday morning, the 11th of September, at ten o'clock. Animals may be entered at any time previous to nine o'clock, on Tuesday morning.

The regulations of the Society must be strictly observed by exhibitors, otherwise the Society will not be responsible for the omission of any article or animal not entered under its rules.

No article or animal entered for a premium can be removed or taken away before the close of the Exhibition. No premium will be paid on animals or articles removed in violation of this rule. All articles and animals entered for exhibition must have cards attached, with the number as entered at the Secretary's office; and exhibitors, in all cases, shall obtain their cards previous to placing their articles or animals on the Fair Grounds.

All persons who intend to offer animals for sale during the Fair, shall notify the Secretary of such intention at the time of entry.

Special attention is required from competitors to the requisitions of the Society upon Field Crops, Fat Cattle, Hogs and Sheep, Dairy and Household Department, Pork, Bacon, and Beef; for full written statements as required under each department; as they are important to the Judges in the several classes before their final decision.

The Executive Committee will take every precaution in their power for the safe preservation of all articles and stock on exhibition, and will be responsible only for loss or damage that may occur during the Fair. They desire exhibitors to give attention to their articles, and at the close of the Exhibition to attend to their removal.

INSTRUCTION TO THE JUDGES,

And the Superintendents of the Different Departments.

The Chairman of Committees selected for the next annual Fair are requested to report themselves to the Secretary upon the grounds of the Society, on Tuesday morning, September 11th, 1855.

In no case must the Judges award a special or discretion ary premium.

The Judges on animals will have regard to the symmetry, early maturity, thorough breeding, and characteristics of the breeds which they judge. They will make proper allowances for the age, feeding, and condition of the animals, especially in the breeding classes. They are required not to give encouragement to over-fed animals.

No stock of inferior quality shall be admitted within the Grounds; and if any shall by accident be admitted, a committee shall be appointed to examine and rule out of the Grounds all below a medium grade.

The animals to which premiums shall be awarded, shall be led up for exhibition at the delivery of the premium.

and so with other articles as may be convenient, and after or before the delivery of the premium, each animal which shall have taken a premium, shall be designated by the badge of distinction, and led into the ring and around it for exhibition of its superiority and high quality to the assembled crowd.

N. B. No person whatever will be allowed to interfere with the Judges, during their adjudication; and any person who, by letter or otherwise, attempts an interference or bias from misrepresentations with the Judges, will be excluded as an honorable competitor.

The Superintendents will give particular direction to all articles in their respective departments, and see that all are arranged as near as may be in numerical order, to lessen and facilitate the labors of the Judges in their examinations.

The Superintendents will attend each set of Judges in their respective departments, and point out the different articles or animals to be exhibited; will attach prize cards to the articles, or flags to the successful animals after the Judges' reports shall have been made up and delivered to the Secretary.

REPORTS OF JUDGES.

The Judges will be expected, in all cases, to withhold premiums when the article or animal is not worthy, though there be no competition. Blanks will be furnished the Committee to fill up in making their reports.

Animals having received premiums of the Society at previous exhibitions, will not be allowed to compete for prizes again in the same class.

FORAGE FOR STOCK.

There will be a Forage Master on the ground, who will furnish grain and forage at market price, to the owners of stock.

Stalls will not be furnished upon the Grounds of the Society for unruly or dangerous animals.

AWARD OF PREMIUMS.

The premiums will be awarded from the Executive stand, at 10 o'clock on Friday morning.

SALES OF STOCK.

The Auction Sale of Live Stock will take place on Thursday at 11 o'clock, A. M.; but the animals sold cannot be removed from the grounds until the close of the Exhibition.

POLICE.

A well regulated Police of the Society, aided by that of the city of Atlanta, will be on the grounds during the entire Exhibition, to preserve order.

All persons having business with the Society, or wishing information not here furnished, will address the Secretary at Athens till the first of September. After that time, at Atlanta, Ga.

JAMES CAMAK, Secretary,
Athens, Ga.

AGRICULTURE IN OUR SCHOOLS AND COLLEGES.

DEAR CULTIVATOR—I have just read with much gratification, the intelligent letter of the magnanimous Dr. TERRELL to the Trustees of the University of Georgia, donating \$20,000 to establish an Agricultural Professorship. And not the least gratifying part of the letter, is that expressing a preference in favor of Dr. LEE, as the first Professor. Apart from the interest which correct men feel for the education of farmers everywhere, self interest and State pride make me regard your noble beginning with much solicitude. The example of your State will have its influence upon others, Tennessee among the rest. Your Agricultural Professorship may be regarded as the beginning of an era—a reformation, which will make a powerful impress upon the character, intelligence, wealth and future destiny of all the States. Our unskillful culture has

so far exhausted the natural agents which co-operate with human effort for the support of man, that an appalling future awaits us; commanding the best talents to come to the rescue. The agricultural professorship in your University is exactly the beginning we need. Dr. LEE has an arduous task to perform; but no earthly situation could be so much in accordance with his own doctrines and feelings, or could so well admit of the exploration of the wide field of almost unknown science before him. He has to make the beginning of a system of instruction, which is to ascertain and illustrate the true nature of all the agents of Heaven lent to man for the culture of the earth, and train them into harmonious co-operation with labor. How vast the undertaking—how inviting the field of science, and how momentous will be the results.

His students will not all be boys of tender years. The young man, the middle-aged and the philosopher of three score years—farmers, scientific men and statesmen may all learn much from his tuition. The magnanimity of Dr. TERRELL will likely be imitated by others; but if not, your Legislature will certainly provide all the means necessary to a Museum and Experimental Farm. These are absolutely requisite; Dr. LEE cannot teach well without them; but with them, his instruction will be worthy of the great cause of agricultural reformation so absolutely necessary.

And permit me to express the hope that the University of Georgia will not stop short, and rest satisfied with an agricultural department alone. Though this is by far the most important to the country, yet in order to make a great, prosperous and learned community, all classes must be educated. Persons in all the occupations ought to have a school, where they can learn, scientifically and practically, all that will aid them in their pursuits. It is, therefore, hoped that your University will ultimately not only teach agriculture, but will also teach the science and practice of all the manufacturing and mechanic arts; so that students leaving the University will be at once qualified, theoretically and practically for the trades they are to follow. Prudence, in this matter, is, of course, important, and, therefore, I do not mean that all the trades of man should be at once taught in your school; but a steady determination to obtain the means as fast as they can be had and to establish additional professorships as you become able, will certainly end in full success in all. It will require a very large capital to furnish all the needful facilities for teaching, practically, all the avocations of the people; but whenever the people of your State can be fully convinced that it is their true interest, they will vote for legal measures to furnish the means. I know that many obstacles will oppose so vast a system of education, but time and patience and united mental effort will ultimately surmount them all. The cause is worthy of the best talents and strongest efforts.

The rapid increase of the human race demands enlightened improvements in all avocations, in order to keep even pace with the necessities of man; and while it is plain that agriculture is the greatest and most important profession in the United States; it is also evident, that much of our prosperity depends upon our own manufactures and the mechanic arts. In these avocations man can do nothing without nature's help. In truth, nature does nearly all the work for man, where he will only hand her the tools. He must then understand nature's ways (laws) of doing in order to know what tools are needed, and how to handle them rightly. It is, therefore, absolutely necessary to full success, that every manufacturer and every mechanic shall well understand all the natural sciences which will unfold all the natural laws and principles that are to aid him in his trade.

In all occupations, agricultural included, there is much of nature's ways of doing, and nature's material, for us all to learn, that we may be qualified to work in accordance

with her laws and be successful. In all former times, science has been too limited, embracing too little of the wide field of the avocations of man. Therefore, we have not suitable text books for teaching in such schools as I have here designated. But we must have such books, and the Professor of each new department of the University ought to write them. They will have better opportunities, and can, therefore, make better books than any other persons.

It may be objected (as many objections can be urged against any useful thing) that at the beginning, qualified professors cannot be found. This is true. But you ought to select men of the best talents and best scientific attainments that can be found, and then let them go to work and educate themselves while they are teaching others. They must avail themselves of such information as they can get from the text books that exist, and let their own researches, studies and experiments furnish the balance to make up such text books as are needed. These books will necessarily be quite imperfect at first, but every new edition will give them wider scope of science, and every new professor will add something valuable, till the whole range of nature's laws will be unfolded and practically taught to students. And here let me request, in behalf of the agricultural interest, that Dr. LEE shall set about at once, and write a text book on agriculture, adapted to schools. Such a book is needed in the University, and will meet with ready sale all over the country. He may thus do much good for agriculture, while he will be able to improve each new edition.

F. H. GORDON, M.D.

Sugartree Farm, (near Rome, Tenn.), Feb., 1855.

BERMUDA GRASS.

Our former remarks upon this grass, have elicited much inquiry, more than has been agreeable, where each inquirer propounded queries enough to occupy a day in answering!

The grass known in Southern Mississippi under this name, *Bermuda Grass*, is that known to botanists as *Cynodon dactylon*, and is undoubtedly the *Duob* or *Doob* grass of the Hindoos, their sacred grass, and is a native of the valley of the Ganges. How it acquired its present local name, is not known, unless from having been introduced to South Carolina from Bermuda at an early day, or supposed to have been derived thence. *It never matures seed*, so far as known, in any of these Southern States; certainly not in these latitudes, but is propagated solely by scraps of sod or of roots. These, when cut thinly from a closely grazed pasture, may be tramped into a barrel or box, and will carry safely to a great distance, and go almost as far as ordinary grass seed in planting out. The ground should be put in thorough order; if for meadow, harrowed quite smooth after deep plowing, and rolled after planting if the soil is light. If for hill-side pasture, plow into horizontal ridges, and protect with guard-drains, and if very poor, apply a little manure in the rows before planting. A very small scrap of sod, or a few joints of stem and root, planted shallow at short distances, say in squares of 2 to 3 feet, will quickly cover the ground.

This grass is an *abominable pest* in the crops, yet its value for meadow and for pasture is so vastly greater than that of any other, known as yet to us, for these latitudes, that it richly repays all the risk and trouble. Devote a piece of rich bottom land to meadow and surround it with a hedge of Cherokee Rose. *It will not pass that hedge.* Shade destroys it. And for pasture, select your poorest, worn, and washed hills; or nooks of creek bottom, occasionally overflowed. A smothering crop of corn and pumpkins, or corn and peas, will so far check its growth on tolerably good land or where a liberal application of guano or cotton seed is made to the crop, as to admit of a crop or

two of cotton being taken. But it compels, most exactly, a rotation of crops. No known plant will improve land so rapidly when only grazed and that not too closely.

As a pasture grass, it far excels the famed Blue grass of Kentucky or Musquit grass of Texas, four to one as a summer pasture, and two to one as a winter pasture. But, for the latter, nothing should be allowed to graze upon it after the first of August, or even first of June would be better.

For hay-making, we unhesitatingly state that it will yield more than double, if not quadruple, the return of sound, nutritious hay, to any other grass yet known to the farming world. And now that machinery or horse-power can be applied to the entire process of mowing, tedding, pressing, etc., no crop grown in this country will equal or approach it in cash return to the acre or hand. For this, however, the richest bottom land on a navigable stream would be requisite, as also good annual top dressings with guano, or rich and fine composts or waterings with a solution of guano, and occasional cutting and rolling, being necessary.

Having been thus explicit, we trust inquirers will look, and try and judge for themselves; merely adding the assurance that we have stated what we know and believe.—T. AFLECK'S "*Southern Rural Almanac*."

THE MARTIN.

MESSRS. EDITORS—I have ever been an admirer of the house martin, and hail with much pleasure his annual return to the little house I have provided for him, but for which he is sometimes compelled to contest with much spirit before its pre-occupant, the blue bird, will yield his right by possession. His friendly disposition, his cheerful, peculiar twitter, to say nothing of his dislike for that unwelcome visitor to our fowl-yards, the hawk, are some of the qualities that make his presence so interesting to me; and I wish that all those mischievous boys about town were all my sons just long enough to authorise me to give them a severe dressing, for wantonly destroying the life of this harmless bird. But I took my pen to call the attention of such of your readers as may not have remarked the habits of the martin, to the regularity with which they make their annual returns. In 1852 and 1853 his notes were first heard on the tenth of March. Last year he made his appearance on the twenty-seventh of February and the present year, on the tenth of March. Some time since, the appearance of this bird, or the whip-poor-will, could be taken as pretty good evidence that cold weather had bid us adieu; but not so now; for recently our seasons have become almost as capricious as some coy maidens.

Respectfully,

V. L.

Cedar Green, (near Augusta,) March, 1855.

CASHMERE GOATS' WOOL.—We have received from Richard Peters, Esq., of Atlanta, Ga., a specimen of this wool. It is fine, glossy and beautiful—of ten months' growth, and about nine inches in length. Judging from this sample, Cashmere goat's wool is "a good institution," and one which we trust will be chartered in this country. Mr. P. remarks that he owns "all of the ewes in the U. States, except three"—and that "they are fast coming into favor in this dog-loving, sheep-hating country, as they can resist the attacks of dogs."—*Rural New Yorker*.

HEADING OF CABBAGES AND CAULIFLOWERS.—It is stated in some of the papers that cabbages and cauliflowers, transplanted twice, with an interval of some two weeks between, will cause them to head much better than without this treatment. It is easy enough of performance, and may be worthy of trial; it is possibly true, that this may be the result.

THE PROGRESSIVE FARMER'S STOCK.

IMPROVED Stock, or rather the improvement of stock, is not unfrequently a passion with the progressive farmer. Its development, however, depends, in a greater or less degree upon location and the adaptation of his farm to grazing purposes. In this department he has an eye to *beauty and blood*, as well as profit. He knows from experience that it is nearly as easy and cheap to produce an animal worth \$100 as it is to raise one which will sell for only half that amount; and, moreover, that in so doing his cash dividends are not only handsome, but a just pride is gratified, and his pleasure measurably enhanced. In the line of horses, if his fancy turn in that direction, he is usually provided with specimens which possess such desirable qualities as blood, beauty, spirit and endurance. For farm purposes, however, he prefers strength and capacity for draft and other hard service. Of cattle he breeds those best suited to his taste and location—combining pleasure and profit if possible. But whether Durhams, Devons, Ayrshires, Herefords, their gards, or natives, he always endeavors to have the best of the kind, and aims at improvement. If a Dairyman, he selects cows from various sources—knowing that good, deep and rich milkers are occasionally found in all breeds; some families or strains of blood, in each, possessing extraordinary milk-producing qualities. But if beef-making or working animals are leading objects, he selects and cultivates carefully from such families as possess, in an eminent degree, the particular qualities and tendencies desired. Cause and effect, and ultimate profit, are studied, understood, and their results demonstrated in the breeding and management of all domestic animals. As a general rule, our friend *breeds from the best*, whatever the expense in the outset, and finds such course to result in his decided advantage.

Hence his Sheep and Swine are of the best breeds obtainable, and always receive proper attention. If fine wool is his principal object, he first procures the right breed of sheep, and then by selection and improvement annually increases the weight and value of both fleece and carcass. And when he has once secured a good flock, he retains it until convinced that a change will result in improvement, and that, too, notwithstanding the smooth yet somewhat fabulous yarns of itinerant peddlers, who discuss most eloquently about the strong constitutions, hardness, heavy fleeces and superiority in other respects, of sheep from eastern or foreign localities.

Concerning the points and qualities of the "Swinish multitude," our friend is not altogether ignorant. From sundry experiments, and other reliable sources of information, he has become tolerably well posted touching the real and so called improved varieties cultivated in his own and distant localities. He long since ignored the slab-sided, long-nosed, wind-splitting, thistle-digging, and decidedly *racy* specimens of the genus *Sus*, so prevalent even at the present day—and turned his attention to the introduction of such plump and weighty varieties as the Leicester, Essex, Berkshires, Byfields, Chinese, Leicesters, Cheshires, and, more recently, the Suffolks. Concerning the last-named he reports the discovery of some excellent and profitable points, though not yet satisfied that he has obtained the *ne plus ultra*. But, notwithstanding his attention to the improvement of Swine, there is one breed with which he is *not* familiar. For reasons which he considers good and sufficient he declines, and indeed utterly refuses, to even experiment with the—*striped pig*!

Though the progressive farmer was never severely attacked with the "chicken fever," so prevalent, if not expensive, of late years, he still keeps some very choice Poultry. His annual war upon Turkey in America, generally about Christmas-time, is usually quite productive, and far more satisfactory in its results than the recent pre-

datory incursions of the Czar of all the Russias into the dominions of Turkey in Europe. The choice dishes composed of Poultry or eggs, or requiring them as prominent ingredients, are too easily and commonly produced at his board to be esteemed as luxuries, or even duly appreciated. Though he has some penchant for Asiatic and other foreign varieties of rare fowls, our friend would not probably travel as far to obtain a Shanghai chicken as John Randolph declared he would to kick a Sheep!

But, whatever be the breed or kinds cultivated, our friend bestows sufficient attention to the care and management of his domestic animals to ensure their protection, and enhance his own pleasure and profit. He looks alike to beauty, productiveness and quality, and enjoys the appearance and comfort of individual members of his flocks and herds, even while he figures upon their pecuniary value. Keeping his stock in good condition through the winter, he possesses a decided advantage over those who have *hides for sale*, or animals too weak or diseased for either service or profitable sale in the spring. Indeed, our friend keeps his stock in a *progressive*, and hence healthy and profitable, condition at all seasons—sufficient feed and proper shelter being always provided.—*Wool Grower*.

SAVE YOUR LAND.

AMONG the subjects interesting to farmers, there is not one of more vital importance, than the one suggested by the above caption. The lands of our State have long been ranked with those of the old, worn out countries; and hundreds of our people, so considering them, have emigrated to the far West, while others have taken their places, and by their progressive skill in farming, within the last ten or fifteen years have caused a wonderful improvement to take place in the general aspect of our country. So great has been the improvement that our lands have actually advanced 50 per cent. in value. If to one cause, more than to another, this advance in value, is attributable, we are inclined to think it is that attention which farmers have within the same period of time paid to the saving of their lands, by the judicious use of *guard drains* or hill-side ditches, grading, &c. It is true that much of this improvement may have been effected by a more liberal system of manuring, resting, and rotation of crops; yet we think that those latter agents have had rather a tendency to *increase the crops* than to save the land. That *guard drains* and *drainage* are the best means of saving land from washing and wasting away can no longer be doubted. And yet some of our farmers are still murdering their lands by the old-fashioned up-and-down hill culture; while such a thing as a guard drain is not to be seen on their premises. This we consider is fully, near akin to that of killing the goose for the golden egg. What is still more strange, some of these old *land pirates*, are numbered amongst our most *intelligent* farmers. To such we say, *save your land*, and its increased productiveness and value, will amply remunerate you for the expense of grading and ditching.—*Edgefield Advertiser*.

We would suggest to the South Carolina farmers referred to in the above article, that they may rid their hills of the pernicious influence of resident water, arising from local springs, which approach near the surface, by a very simple method. Augers or borers are made of two-inches in diameter, similar to those used for boring the soil for the insertion of telegraph posts, and if at spaces of 20 feet apart in each direction, they will bore holes in their side hill soil, lifting out the earth to the depth of 3 feet, they may then insert in each hole a common ceiling lath, and the next day will be able to ascertain on which of the laths the water has risen to the highest point. By following the line of those holes in which the water shall approach nearest to the surface, they may make a drain

which will cut off, and carry away, all the springs; whereas if such drains be dug by guess, they may escape such points as would effectually rid them of the excess of water. — *Working Farmer.*

THE "WILD GRASS" OF COL. STANFORD—REPLY TO "AGRICOLA."

To "Agricola."

MY DEAR SIR—I noticed your remarks upon the Wild Grass in the last November number of the *Cultivator*, but have been too busily engaged in matters of more importance, to make my bow to you at an earlier day, and hope you will excuse the neglect.

You are incredulous as to the qualities of the grass of which I gave a description, and volunteer the opinion that it is "*Multicaulis*," or a humbug, and appear to be astonished at the price. Permit me to inform you that I am not disposed to sell it for less, (whatever I may choose to do in the way of giving it to personal friends) because I wish first to furnish seed for 20 or 30 acres on my own plantation, and until I have done so, I consider it worth more than the price asked.

After the three years experience I have had with this grass, were all the seed lost, down to the thimblefull I began with, I would cheerfully give one dollar for each individual seed of it; and as it is not my intention to supply any one (in the coming season) with more than half a pint of seed, no one can be "*multicaulised*" out of more than one dollar, should it fail in his location. After the trouble of putting up the seed neatly to go by mail, I do not believe this will be any very great speculation. No one is obliged to buy it at the price, and if they do not, I may, in time, be able to sell "*by the whole crop of 200 or 300 bushels at ten dollars per bushel.*" I think it will then pay better, and you, or some "witty" friend of yours, may "buy it on speculation."

By the more respectful notice you take of the "Rescue Grass," many might well suppose that you had some interest in the "*crop speculation at ten dollars per bushel*" on that grass, and from the description I have had of it, each seed is about the size of a grain of oats; if so there would be about ten times as much in a bushel wild grass seed as in the "Rescue" and the price would, consequently, be nearly the same. The "Rescue" speculation would then be upon hundreds of bushels, while mine would be confined to a few half pints; and this does really look like a little sly side puffing of the "Rescue," with a bold hit at what is feared as a rival grass. But rest easy; I shall let the grass do its own puffing; and if you cannot afford to pay for the seed, write me, under your proper address, and I will send you some free of cost, which you may sell if you please, at "*one dollar the teaspoonful.*"

But to leave off this waste of ammunition, by firing in the bush at an invisible adversary, I am satisfied that my wild grass is a perennial winter green and the best grass that has ever been cultivated in this part of Georgia, (latitude 34° 40') and am only anxious to ascertain whether it will produce as well in a sandy soil and warmer climate, it was for this reason that I offered seed in such small quantities as could be sent by mail, before I was prepared to dispose of any. The experiment may prove to be of great advantage to the lower part of the State, and if it fails it must seriously injure any one.

As to the Rescue Grass, I have no doubt it deserves the high character the press has given it, but as it is admitted to be an annual grass, and therefore must be annually sown, like wheat or oats, it certainly cannot, in economy, compare with a perennial grass, unless it should greatly excel in the weight of the crop or in nutritious qualities; of the amount of crop it produces, I am not informed, nor have I made any estimate of the weight per acre of my wild grass. I can only say that it

grows thickly on the ground, from three to five and a half feet high; stands up well, and that it is as tender from the stem end up to where it branches for seed, as Timothy or Herds Grass; that it has produced equally good crops on the same ground (without re-sowing) for the last three years, and without manure of any kind, and is now (Feb. 14) green, in good condition, and 6 inches high, notwithstanding that it has been left to ripen its seed every year, which is considered to be injurious to the growth of all grasses. Respectfully,

JOHN R. STANFORD.

Clarksville, Ga., 1855.

LICE ON CATTLE.

MESSRS. EDITORS—Having seen in the *Cultivator* many articles on the subject of Lice on Cattle, and one in particular from B. N. Andrews, Waterbury, Ct., I beg to reply thereto. I am accustomed to purchase cattle from droves in the fall for wintering, and have been greatly troubled in this way; and having tried tobacco, oils of various kinds, skimmings of the pot where pork had been boiled, &c., and finding all very objectionable, rendering the hair of the creatures rough and filthy, I resorted to other means, and found them better. Having purchased a pair of cattle with sore necks all covered with lice, some one told me to bathe them with N. E. rum; I did so, and it killed all the vermin that it came in contact with, and healed their sores at the same time. It may be applied most conveniently with a sponge; I have used it for three years, and find it not only effectual but cheaper than any other dressing; half a pint, the cost of four cents, being sufficient to kill the vermin of any ox cow; and I think that tobacco, unguentum or grease need not be cheaper; besides which, it leaves the hair clean and smooth. It may require to be used twice, as some nits of the vermin may hatch after the first application. It is also an excellent remedy for the sore shoulders or back of galled horses, as well as lameness or hurts in all kinds of cattle, as also, the sore or cracked teats of milk cows. It should be disguised with camphor or other harmless article and be kept in every barn, or under lock and key, as it may possibly evaporate under some latitudes!

G. D. G.

[*Boston Cultivator.*]

LOP-EARED MADAGASCAR RABBITS.

MESSRS. EDITORS—It is now many months since I took advantage of the wide circulation of the *Southern Cultivator* to inform applicants that it was impossible for me to furnish any more Rabbits till the numerous orders on hand had been filled. This has now been done. My Rabbits have been enlarged, and I now have some half dozen extra pairs of fine, young Rabbits which I will dispose of as per enclosed advertisement, which I will thank you to insert.

Since my article on the Rabbits, which I penned more from my knowledge in England than my experience in America, I find some things in relation to these little animals should be corrected. For instance, in this warm climate the breeding hutch should not be less than four feet long, two feet wide and sixteen inches high; the floor should not have more than one inch of drip to the back, and the opening there, for drainage, not wider than half an inch.

The most thorough ventilation is necessary to the health of the rabbits. Any taint from crowded hutches, and close rooms, is ruinous.

In feeding, I would warn the Rabbit breeder against the use of lettuce when going to seed, for then its narcotic principle is too powerful, and will cause death.

I recommend a full supply of hay when roots only are used for green food, as it furnishes the necessary bulk which oats only would not do, excepting when fed in combination with succulent vegetables.

Notwithstanding water is so entirely interdicted by

"*The Fancy*," yet I have given it without any ill results.

Breeding from close affinities will soon destroy the best stud of Rabbits; it is, therefore, necessary to introduce fresh blood every year into a rabbitry, which, of course, is most easily done through the male.

The climate of the South must be especially favorable to the breeding of this little animal; and I should think that it would become a great favorite with the negro, and, consequently, be well attended to under his care.

I am, respectfully, yours,

R.

Morris, New York, Feb., 1855.

CHEMICAL EXAMINATION OF THE COB OF MAIZE, OR INDIAN CORN.

BY J. H. SALISBURY, M.D.

It is well known that the manure of an animal varies in quality with the food which it eats; and that, generally, manure is richer in nitrogen bodies, and less rich in non-nitrogenized matter than the food consumed. Probably a greater proportion (though I do not know as this has actually been demonstrated) of 100 lbs. of nitrogen bodies would be assimilated by the system, if it were mixed with 500 lbs. of non-nitrogenized matter; and still more if mixed with 1000 lbs., than if taken into the system undiluted or alone. It should be borne in mind that it is as essential for food to contain bodies destitute of nitrogen, (such as starch, sugar, oil, etc.), or those that go to support animal heat and respiration in the body, as it is to have nitrogen compounds to nourish or supply the waste of the living tissues. Hence, food suited best to sustain animal life, is that which is made up of these two classes of bodies mixed in the proper proportion. And a deficiency in the one is equally as deleterious to the healthy existence of the animal, as a deficiency of the other; therefore, we can hardly say that one of these classes is in reality more essential to the maintenance of life than the other. They both seem to perform equally important offices. If this view be taken, the cob cannot be regarded as deficient in those bodies which contribute to respiration and nutrition. The following table shows about the amount of the several proximate organic bodies thrown away in rejecting the cob, calculated from the analysis of the small white flint variety; 1000 lbs. of ears contain not far from 200 lbs. of cob and 800 lbs. of grain. These contain the following bodies in the following proportions, expressed in pounds and decimals of a pound.

	200 lbs. cob.	800 lbs. grain.	1000 lbs. ears.
Sugar and extract....	13.582	115.320	128.002
Starch.....	.003	487.384	487.387
Fibre.....	127.687	7.712	135.399
Oil.....		39.824	39.824
Zein.....		31.856	31.856
Matter separated by			
potash from fibre....	45.404	51.856	97.260
Albumen.....	1.518	37.136	38.654
Casein.....	.288	.688	.976
Dextrine, or gum....	2.310	28.224	30.534
Resin.....	1.806	....	1.806
Glutinous matter....	7.402	....	7.402

200 lbs. 800 lbs. 1000 lbs.

In the above table, the inorganic matter is not separately considered, it being distributed among the several organic bodies. By rejecting the cobs of 1000 lbs. of dry ears, about 200 lbs. of organic matter is lost, which consists of 13 1-2 lbs. of sugar, and extract; 127 1-2 lbs. of fibre; 45 1-2 lbs. of matter, separated from fibre by a weak solution of potash 1 1-2 lbs. of albumen, .288 of a pound of casein, 2.31 of gum or dextrine, 1.8 lbs. of resin, and 7.4 lbs. of glutinous matter. Hence the cob, though not rich in nutritive matter, can by no means be said to be

destitute of those proximate principles which go to support respiration and sustain animal heat, and those which are capable of being transformed into nerve, muscle, etc., and the phosphates which contribute so largely to the formation of bone.

TURNIPS AS FEED.

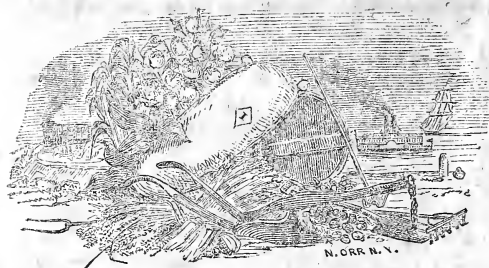
WHILE in attendance upon the late National Poultry Show at Barnum's Museum, (says the Editor of *The Plow, the Loom and the Anvil*) we spent a few minutes in the "Lecture Room." Our friend, Mr. Solon Robinson, was making remarks upon the use of turnips as feed, as reported in some of the journals of the day. He took the position that they were good for nothing as nutriment, and sustained himself by giving its analysis. This is all very well, but unfortunately it is not in accordance with well-known facts. We used to talk in the same way, but were obliged to yield, not simply to a few doubtful experiments, but to years of experience. This the speaker seemed to feel, for he admitted that "in England it might not be so." But we suppose a turnip in England is very much the same thing as a turnip in New York. He also added that they should be fed by turning the cattle in upon them, as they are growing in the field. We can not see the force or propriety of this distinction. Is it not the same worthless thing before it is pulled, as afterwards? Must the cattle or sheep pull it, or bite it off, to render it nutritious? But even here there is no escape, for the English practice is, after the animal has bit off as much as is practicable, the root remaining in the ground is then lifted by a fork and left on the top of the ground, for the cattle to eat at pleasure.

We are compelled to admit that there is something in this fact of nutrition, that no doctrine of chemistry or physiology is able to explain. The fact is unquestionable that turnips are excellent for fattening sheep and cattle, whether we can explain why it is so or not. It is equally true, as Mr. R. stated in the same speech, that about 97 per cent. of the flat turnip, as shown by a chemical analysis, consists of water. These two facts, so apparently contradictory, are entirely above and beyond contradiction. We subjoin the following, on this subject, which appears in the *Northern Farmer*:

"The vegetable I wish to recommend as the best, all things considered, for milk-cows in winter, is white flat turnips. Some, perhaps, will object to the turnip, because it will affect the taste of the milk and butter. So it does if fed raw; this can be avoided by boiling. For each cow boil a half a bushel of turnips; while hot, add five or six quarts of shorts; which will swell, and you will get the full worth of it. A mess like this fed to a cow once a day, will produce more milk of a good quality, than any other feed at the same cost. Turnips fed in this way do not taint either milk or butter. One thing in favor of turnips as food for cows, is, that they can be sown in August, or as late as the first of September. I sowed some as late as September, last year, which were very fine. Turnips are also very profitable feed for pigs, when boiled in the same way as for cows."

REMARKS.—We have fairly tested the value of Turnips the past winter, and must add our testimony to the above. We do not know of any winter food for cattle in this climate so economical and valuable.—Eds.

CURE FOR RINGBONE.—I noticed in the *Cultivator* for May 15th, an inquiry for the cure of a ringbone in a colt, and answer, take high wines of cider brandy, add salt-petre as much as will dissolve, and wash the ringbone two or three times a day. One of my neighbors cured one of three or four years standing, by the application of this a few times.—*Boston Cultivator*.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 4..... APRIL, 1855.

ANSWERS TO INQUIRIES, &c.

A. C. A., Jackson, Miss.—Thanks for the seed. The number you desire is sent. Your suggestions are quite pertinent, and your article on the "Rescue Grass" will appear in our next.

OLINTON, Arkansas.—Your desire shall be complied with as soon as we can procure the article you allude to. We will publish your communication next month.

E. M., Miss.—Our remarks had a general application, and were merely intended as a hint to a certain class of readers, of whom (we are happy to perceive) you claim not to be one. If taken in the proper spirit, they are entirely "void of offence." We might retort upon the thin-skinned sensitiveness of our correspondent, but *cui bono*? We utterly repudiate anything like personal controversy in the columns of this journal. Its object is to "improve the soil and the mind."

J. W. H., Chulahoma, Miss.—Write to J. A. ANSLEY, of this city, for the "Battay Potato." He may still be able to supply you. A few small tubers might be sent you per mail, if you so desire.

B. M. P., Somerville, Tenn.—Wrote you per mail, March 15th, returning \$2.

J. N. H., Live Creek, Ala.—Address Messrs. CAR-MICHAEL & BEAN, of this city, in regard to the thresher.

E. E. C., Helena, Ark.—The newspaper you speak of has not reached us, and we are, therefore, unable to publish the advertisement. Be kind enough to cut the scrap out, and enclose it in a letter to us.

J. C. S.—Your request for an article on Cheese Making will be complied with in a future number.

O. R. B., Florence, Ala.—We have plenty of the Oats you forwarded us. It is a good winter variety, but by no means equal to the Large White Winter, the "Hunter" or the Egyptian.

J. C. S., Blairsville, Ga.—The "Country Gentleman," published weekly at Albany, N. Y., (\$2 per annum); The "American Agriculturist," weekly, New York City (\$2 per year); The "Pennsylvania Farm Journal," monthly, Philadelphia, (\$1); or the "New England Farmer," monthly, Boston, Mass., (\$1), are all good and valuable journals, which you might read with pleasure and profit.

A. D. L., Hancock Co., Ga.—It is an old adage that "a good horse cannot be of a bad color" yet there seems to be a prejudice among horsemen against white or "stocking feet." We find the following, upon this subject, in an exchange paper:—"Why are horses with white legs and feet less valuable than those which have them not?—Because, even in a wet soil and climate, white hoofs are more liable to accident and lameness than black ones, and in stony soil, white hoofs are much more liable to break and to contract than those of a dark color." To which another editor replies:—"White feet

and a white face on a horse are indications of physiological conditions not favorable for endurance, or any other good quality. They are, in fact, indications of a *scrofulous tendency*. Hence the following, quoted by horsemen from time immemorial:

One white foot—buy him.
Two white feet—try him.
Three white feet—deny him.
Four white feet and a white nose—
Take off his hide and feed him to the crows."

W. L.—Broom Corn will grow well on any good, rich bottom land. Its culture is quite similar to that of common corn. The leaves are good fodder for stock, and the seeds may be fed to fowls. We do not know of any seed for sale in this vicinity. We notice that Messrs. CLEMENT & MAYS, of Muscogee Co. Ga., have commenced the manufacture of brooms out of Palmetto leaves, on an extensive scale. The brooms are made upon the pattern of the corn broom, and are said to last four times as long. They furnish them, we believe, at about 30 cents a piece.

B. C., Columbia, S. C.—The *Flat Dutch* is one of the best early Turnips. After all danger of frost is over, they may be sown in a highly manured and well pulverized soil. Dust, with 5 parts of soot and 1 of sulphur, when the plants come up, and as soon as they begin to bulb or fill out thin them to a stand of 8 or 10 inches.

PLANTING SWEET POTATOES' LEVEL.—In answer to our correspondent, "Lincoln," we would state that the prize Essay of Rev. Mr. JOHNSON has never been published. It is in the archives of the "Southern Central Agricultural Society," from which we hope to see it exhumed ere long. See article on this subject in present number of this journal.

UNITED STATES AGRICULTURAL SOCIETY.

The third annual meeting of this Society was held at Washington City, on the 28th of February last. Hon. M. P. WILDER was re-elected President, and most of the chief officers are the same as last year. Reports were read on Chess in Wheat; on Agricultural History, by B. P. POORE; on Glover's Collection of Models of Fruits and Insects, by Mr. PECK; and on Western Fruits, by Dr. WARDER, of Ohio. Papers were received from Dr. MORTON on Alderney Cattle, and from New York on the Potato Rot. Lectures were delivered by Hon. G. P. MARSH on the Rural Economy of Continental Europe, and Dr. WARDER on Live Hedges. Resolutions were passed in opposition to the Reciprocity Treaty, and calling a Convention of Delegates from each State in the Union, to be held in Washington the first Friday after the next annual meeting of the Society, "in order that an agricultural platform may be established, which will meet the views of, and be sustained by the whole body of agriculturists as a profession."

"CAN'T GET ALONG WITHOUT IT?"

An old friend and subscriber, in Burke Co., Ga., writes us as follows:

"EDITORS SOUTHERN CULTIVATOR—Gentlemen:—I thought this year I would just try and get along without my old friend, the *Cultivator*, but I find without it I am like a ship at sea without a compass. The fact is, I would not be without for it twenty times the price of subscription; so just send it along and consider me a perpetual subscriber."

"Enclosed you will find the dollar.

"Very respectfully your obedient servant,
R. H. G."

March, 1855.

MAKING TURPENTINE.—Will some of our readers engaged in, or acquainted with the business of making Turpentine, give us a plain, practical account of the same, for publication?

"THE CAROLINA CULTIVATOR," is the title of a new monthly of 32 pages, published at Raleigh, N. C., at \$1 per annum, in advance. It is published and edited by Wm. D. COOKE, Esq., aided by several gentlemen of talent and experience. We wish it abundant success in its efforts to improve the agriculture of the Old "North State."

RANDALL'S COTTON PLANTER.—See advertisement and notice of this machine in present number. The recommendations are strong and to the point.

PLANTING SWEET POTATOES IN LEVEL GROUND.

For the benefit of our correspondent, "*Lincoln*," and others, we republish the following, which was contributed to one of the earlier volumes of this journal by Col. Wm. McKINLEY, of Lexington, Ga.:

SIR—The old method of planting sweet potatoes in hills and ridges, in this dry climate, and on our hard upper country lands, is all wrong. Potatoes must have *moisture* and *soft earth* to do well. But they lack both in the common culture. Hills and ridges are the driest forms in which you can put the soil. *Flat* culture is the only right kind for potatoes, or anything else, in our burning climate and on our clay uplands. Potatoes should be planted as *flat*, and may, in that way, be planted as *easily*, as corn.

First, break up the land well; then lay off rows 4 feet wide with a shovel plow; run *deep* in the same track with a rooter, and then, if you want it perfect, deeper still in the same furrow with a common new-ground coultter. Next, list upon both sides of this in the same way; that is, with shovel, rooter and coultter—one right in the track of the other. This makes deep work, and the deeper the better. It is soon done. Your ground is now ready—deep, loose and moist, and will keep so all summer.

Now for planting and culture. With a rooter draw a shallow furrow on the top of the list, just over the first shovel track, to guide you in dropping. In this drop the seed, cut roots, sprouts or vine-cuttings, twelve or fifteen inches apart, and cover lightly. Plow them a few times, just like corn, running close to the potatoes with a rooter, and finish off each working with a cultivator, or some other plow to keep the middles flat.

This mode of culture is not one-fourth as troublesome as hills; the crop is wonderful. This is not theory, but is my constant practice. By this mode the vines never turn yellow; the crop comes forward early in August, and the owner has no chance to talk about "small potatoes."

COTTON AND ITS CULTURE.

OUR old friend and correspondent, "*Broomsedge*," writes to the *Farmer & Planter* as follows:

We never could see the sense of throwing up, with great care, a high bed for cotton, and immediately set all hands to work to tear it down. We have tried various expedients, but never found out how to plant cotton until last spring. For this we acknowledge our indebtedness to Capt. Thomas Byrd, of Greenwood, from whom we received an implement for smoothing and opening the cotton bed, which does its work to perfection, a cover adapted precisely to follow in the wake of the opening, leaving your beds nicely smoothed over and ready for the reception of the seed, and a scraper to do the first working—decidedly the best implements we have ever seen. This forms a complete set of implements, adapted to cotton culture, simple and cheap, which any good blacksmith and plow stocker can make easily. If Novice will try Capt.

Byrd's implements, and not agree with us, we will acknowledge the corn, and pay for them. Let us be understood, we are not puffing an implement manufacturer, but offering an acknowledgement due to a public spirited planter who took the pains to set us right. By the way, while talking we may as well say that the best variety of cotton we have ever planted, is called the "*Calhoun Cotton*." Where it originated, we are not able to say. Capt. Byrd kindly sent us half a bushel of seed, from which we have picked 511 lbs. of very beautiful cotton. The overseer counted 70 bolls upon one stalk not over knee high. It is no humbug—for we have selected our seed for years from fancy stalks, and being side by side, we have been compelled reluctantly to give it up. We trust that even Broomsedge may be allowed to puff a home-made article. Before closing we must dissent, however, from Novice's declaration. Twelve hundred lbs. cotton per acre on common land—stand or no stand—it is no common land that will average 70 bolls of matured cotton per stalk.

CORN FODDER.—My cows have eaten, this winter, without 20 lbs. waste, what came from an acre and one-fourth, excepting what was cut and fed out green before November. I have bright clover, and English hay, red-top, &c., but nothing that is liked as well by cows giving milk, as cow-corn. They eat it "all up clean," and give more and better milk than when fed on hay. My cow-corn, when sowed, is the best white flat I can get, and from as far south as Delaware, the farther South the better. Rows, 3 1-2 feet apart, from 40 to 60 kernels to a foot in the drill, sowed with a machine of my own construction. The fodder from one rod square, weighed 225 lbs. when taken to the barn—a more perfect drying of the stalks would have reduced the number of pounds some, how much I know not.—*Cor. Granite Farmer.*

PLANTS POISONED.—Dr. Salisbury, of Albany, recently communicated to the American Scientific Association, some experiments on plants, which illustrate the analogy existing between animal and vegetable physiology. Dr. S. extracted the poison of a dead rattle-snake, a small portion of which he inserted in the plants by moistening it with the blade of a knife, with which he wounded a lilac, a horse chestnut, a corn plant, and a sun-flower. In sixty hours after the infliction of the wound, they began to manifest symptoms of poisoning, and in a few days all the leaves above the wound were dead. In about fifteen days, they manifested convalescence, and nearly all recovered from the injury.

ACORNS AND CATTLE.—The *Pennsylvanian Farm Journal* gives an instance of cattle being killed by excessive eating of acorns. The fatality occurred on the farm of Richard Lamborn, near Westchester, Pa., who lost fourteen head in the course of a few days. The cattle at first showed symptoms of illness by watery eyes, drooping head and spiritless walk. The cows failed of their milk, their carcasses were almost bloodless, and the stomach and intestines exhibited every appearance of suffering from powerful astringents. As acorns are known to possess astringent properties to a considerable degree, there can hardly be a doubt that they were the cause of the difficulty. Some varieties of acorns are much more astringent than others. The nuts in this case were of White, Black and Chestnut Oak.—*Am. Agriculturist.*

DEADENING TIMBER.—When the bark slips freely in June, July, or August, is the best time to girdle trees. Cut the small growth three feet above the ground; the roots do not sprout, and the stumps are more easily removed.

SOUTHERN CENTRAL AGRICULTURAL SOCIETY— PREMIUM LIST—FAIR OF 1855.

THE next Fair of the Society will be held in ATLANTA, during the week commencing on the 10th of September.

We publish the Premium List in full in our present issue, and trust that all who desire to compete for the prizes will give attention to the Rules, Regulations, &c. Much of the dissatisfaction which has characterized former Fairs, undoubtedly sprung from inattention on the part of exhibitors to the Rules of the Society. The difficulty—nay, almost impossibility—of obtaining Judges or Committee men who are both *competent* and *willing* to discharge their duties properly, has also been a very serious drawback upon the progress and usefulness of the Society. To these two causes, more than to any want of zeal and management by the Executive Committee and other officers, may be attributed the waning interest of the public in this and similar associations; and as the remedy rests with *the people* themselves, we hope to see it applied. It is very ungenerous and illiberal to expect the managers of societies to devote their time, energies and means to the building up of an institution *pro bono publico*, without proper co-operation and support from the masses. Many gentlemen who have sustained and kept up the Southern Central Agricultural Society for years, have reaped no other reward for their toil than the abuse and misrepresentation of those whose interests they were faithfully endeavoring to subserve; and it is not at all to be wondered at if they should now feel disposed to “strike for higher wages,” and give over the management of the Society into the hands of the cavaliers and fault-finders. We consider our Society, just now, at a critical point in its history; it may still be made productive of the most glorious results to Georgia and the South; but to accomplish these results, the officers must have the earnest, active and cordial assistance of spirited, progressive agriculturists and of the people at large. We cannot think that such assistance will be withheld, as the present Board of Managers is every way worthy of confidence and support.

Atlanta, as a location for the Fair, possesses many advantages. It has a very healthy and agreeable climate—is central; of easy access from all points; and affords ample hotel accommodations for a multitude of people. We think the interests of the Society would be greatly advanced were the Fair “settled down” at Atlanta for the next five years; provided that city is disposed to offer the proper inducements.

HOW TO USE BONES.

WHERE the oil of vitriol is as expensive and difficult to be had as it is in the interior of Georgia, and bone mills are not in the country, one is at a loss how to use the bones that may be collected in the course of a year, for agricultural purposes. If phosphates were abundant in the soil, the wasting of nearly all the bone earth taken out of the surface of the ground by the feeding of stock, and tillage, might not produce any immediate ill effects; but unfortunately, the phosphate of lime exists only very sparingly in most of the land under cultivation, and to throw it away, as is now done, is a prominent defect in modern agriculture. Every cultivator can gather bones and break them up into small pieces with an old axe or sledge-hammer and cover them in a heap of fermenting manure, where the carbonic acid and other solvent will dissolve most of them in a few months, ready for the nourishment of growing plants.

Bones boiled some time in a strong ley made from wood ashes, crumble into a powder, because the alkali combines with, and abstracts all their animal parts. Mixed with dry loam, mould or compost, such ley and bone dust are a durable and excellent fertilizer. In this way, the bone

earth is less soluble than when treated with the oil of vitriol, because it is not a super phosphate, like the bone earth of commerce, but the mineral remains as it existed in the bones before they were boiled in ley. Where one can obtain sulphuric acid at a moderate price, he had best use from 35 to 40 pounds of vitriol, according to its strength and cost, to 100 pounds of dry bones. The latter should be broken as fine as practicable; and the acid should be mixed with four or five times its weight or bulk of water before the bones are added. The half of a molasses hogshead, set in the ground in puddled clay, to be sure that it will not leak, answers an excellent purpose for making super-phosphate of lime. Some one ought to manufacture the oil of vitriol in Georgia for all domestic uses; as the sulphur can be imported vastly cheaper than the corrosive acid. It is made in Baltimore. If this acid were as cheap at the South as it is in England, it would be worth millions to the cotton-growing States, for they need, above all things, in a business point of view, cheap fertilizers to aid in the production of their great staples. Flour is now selling in Athens at six dollars per 100 lbs., and meal proportionably high. Such prices, in a small inland town in a grain-growing district, are calculated to turn public attention to all concentrated manures; and among them, bones are not the least important. The growing consumption of imported super-phosphates and Mexican guano, (which is mainly bone-earth) indicates one of the most pressing wants of the soil. Men engaged in the manufacture of vitriolized bones, pay \$20 a ton, and often more, for those that they sell at a round profit. As far as practicable, all the raw material of crops should be drawn from our own home resources, and husbanded at all times with perfect economy. After this shall have been done, poor lands will still require imported manure of some kind to obtain the highest reward for rural industry. Without the elements of crops in the soil, plowing, planting and hoeing all go for nothing. Hence, the writer is laboring to gather up all the ashes and bones within his reach; and respectfully urges his readers to do likewise. When it is too wet to plow, some hands may be profitably set to raking up leaves into good sized heaps to rot, and form a quasi-manure. The acids evolved in the decay of such heaps will operate favorably on leached ashes and pounded bones—rendering them more soluble, and, therefore, more available food for growing plants. If one could be sure to escape a dry summer, leaves, bones and leached ashes plowed in early, would decompose sufficiently to enrich the land; some the first year, and more the second. Decaying vegetable matter is nature's means for dissolving all the minerals needed to form her highest classes of plants. This fact applies as well to silicates of lime, potash, soda and magnesia, as to phosphates. L.

THE FAIR OF 1855.—OFFICIAL NOTICE.

Atlanta, March 8, 1855.

MESSRS. EDITORS—The Executive Committee of the Southern Central Agricultural Society assembled in this place to consider the various propositions for holding the next Annual Fair, have decided in favor of Atlanta, the bid from that city being more favorable, and largely in advance of all others. The next Fair will be held during the week commencing September 10th, 1855.

JAMES CAMAK, Secretary S. C. A. S.

EAST TENNESSEE FAIR.—The Fair of the Eastern Division of Tennessee, will be held at Loudon on the 23d, 24th and 25th of October next. We have received a copy of the Premium List, which is very well arranged. Letters of inquiry respecting the Fair, may be addressed to Maj. A. S. LENOIR, Loudon, East Tenn.

INACCURACY OF AGRICULTURAL STATEMENTS.

No one who does not make agricultural facts and deductions a professional study can have a true idea of the amount of errors most industriously taught in books and periodicals, including newspapers, relating to rural affairs. We have sometimes thought that the more important the subject under discussion, the greater the mistakes committed in stating its strong points. Take, as a sample, the duty of saving nightsoil, which is now generally wasted, in cities and villages, and few discuss the matter without shocking all common sense by following wild theories. In the March number of this journal a short article on this subject is copied from the *Edgefield Advertiser*, in which a calculation is gone into to prove that the manure to be obtained from a single colored person on a plantation, in a year, is worth *fifty-six dollars*, with the aid of only three dollars' worth of charcoal and gypsum to fix the ammonia and other volatile elements. Estimating corn at a dollar a bushel, and bacon at ten cents a pound, as the writer does, he still appears to consider the nightsoil formed by this food *worth twice as much* as the the market price of the bacon and corn consumed!

Had the gentleman, who very properly called public attention to this "domestic African guano," estimated the fertilizer as worth only half as much as the food that made it, his suggestions would have been far more likely to be reduced to practice. If one could be certain of getting a dollar a bushel for all the corn he may raise, he might then safely pay fifty cents for a concentrated manure that would give him an increase of a bushel of this grain; for he would in that case have fifty cents for his labor and profit.

In an article, headed "Facts about the United States," on page 96 of the same number of the *Cultivator*, it is stated as a fact that "The value of its farms and live stock is five hundred million dollars." This is an error of over four thousand million dollars. Five years ago "The cash value of farms" in the United States was returned to the census office at \$3,266,925,537; and the live stock at \$543,822,711; making together nearly four thousand million dollars. They are now worth not far from five billions.

In an extended essay on the "Improvement of the Domesticated Animals of the United States," written for the forthcoming Patent Office Report, the writer had occasion to examine the official and non-official data showing the present number and value of live stock in the Republic. The value is above seven hundred million dollars.

Among other *fictions*, miscalled "Facts about the United States," it is stated that the United States annually yield four hundred thousand bushels of corn. Now, everybody should know that the crop grown in 1849, as returned in June, 1850, was 592,141,230 bushels; and, taking the increase from 1840 to 1850 as the basis of the calculation, it is easy to see that a fair present average crop of corn is over seven hundred million bushels, instead of four hundred millions.

When we look into other agricultural papers, they seem to abound in errors of a more injurious character; and it is not difficult to discover the causes of a part at least of the popular prejudices against "book-farming." How to correct this evil, elevate and improve the rural literature of the country, is a question of no inconsiderable moment. Perhaps nothing better can be done at this time than to criticise the statements published, as they come from the pens of different writers. We have little taste or talent for such a task; but it would please us much to see the able and piquant pen of "Broomseidge" resume its labors in reviewing the current rural literature of the Southern States. England owes much of her high rank in agricultural learning and science to the thoroughness with which all rubbish is swept away by capable and unsparing reviewers

In this country, nothing is pruned; thorns, briars, weeds bushes all grow with our best crops, which have about the least possible culture. How much longer ought American writers on agriculture to be deprived of the great advantages of plain and truthful criticism? In what other way is it possible to separate clouds of worthless chaff from genuine wheat? Truth, Science, and Literature suffer equally with agriculture itself from the carelessness and crude assertions that rule the hour. L.

AFFLECK'S PLANTATION RECORD AND ACCOUNT BOOK—No. 1—for forty hands or under.—We can supply a few of these excellent books at \$2 50 each. The cost of sending them per mail is only 30 cents. We will send them and pre-pay the postage at \$2 80.

A PLANTER OF THE RIGHT STAMP.

An intelligent and progressive agriculturist of Alabama, in sending us a club of subscribers, remarks:

"GENTLEMEN—I settled fourteen years ago on an old worn out farm; the land washed in most places to the clay, and it did not pay for the cultivation. I saw that I must move or do something for my land. I sent, about 7 years ago, for the *Southern Cultivator*; studied it, and from its pages I was induced some years ago to ditch the worn out hill-sides and horizontalize the rows and to make and apply all the manure I could get of every kind, from my lot, the woods, the yard, all the ash piles, &c.; and my old land is now in a condition that yields as good crops as they did fifteen years ago, and improving every year. My whole farm (some four hundred acres) is all horizontalized and the hill-sides ditched, and all the result of taking and reading the *Cultivator*. I have received information from one single number which was worth more to me than all I have paid you for the paper; and I have from the 5th- to the last volume, and would live on half allowance one month rather than do without it one year.

Very respectfully,

G. M. H.

AGRICULTURE IN AMERICA.

THE Washington (D. C.) *Sentinel* indulges in the following reflections on the agricultural aspect of our country, at the present day:

It is pleasant to turn for a moment from the political demoralization of the country, the strifes of angry spoilsmen, and the clamorous fanaticism of incendiaries and abolitionists, to contemplate the peaceful assemblages, fairs and exhibitions, that the prevalent interest in agriculture is bringing about throughout the country. Agriculture is, at last acknowledged to be the basis of the wealth, the prosperity, and the happiness of this country. For a long time neglected, it is now attracting the attention and engaging the zealous efforts of many of our most prominent men. This newly-awakened zeal has spread from State to State; and many who hitherto contended against each other, with emulation, in the strife of politics, are now engaged in a peaceful agricultural competition. There is a general rivalry among farmers, as to which shall exhibit the best ordered farm, and which shall raise the best stock, cattle, fowls, fruits and flowers. This is an incentive to agricultural societies, and the exhibitions held under these auspices, together with the premiums awarded by their committees, have greatly reacted to increase the friendly competition. Many of our first men—first in politics, first in letters, and first in social standing—have caught the impulse, and are directing their labors and their energies to make agriculture the chief profession and the chief interest of the country.

This is one of the best indications in favor of the development of the wealth of the country. But, at the same

time, we hope that the ambition to excel as agriculturists will not degenerate into a base passion for money-making. The hospitality of American farmers has been one of their most attractive qualities, and we should lament any change that would transform them into selfish, heartless, and hide-bound hunters after the "almighty dollar." Perhaps the most marked tendency of our present race of men is to money-making. It has become the absorbing passion of many classes. Our mechanics, our tradesmen, our lawyers and doctors, and those engaged in the various departments of traffic and commerce, vie with each other in the pursuit of wealth. Foreigners speak of us as given up to the worship of mammon. They accuse us of eating fast, going to bed late, rising early, neglecting wholesome recreations and needful exercise, in order to make the most we can out of our business.

We hope the great agricultural class, who thus far have escaped the general demoralization, political, social, and business, and who have honored their country by making American hospitality proverbial at home and abroad—we hope that they will not be drawn into the current of that shining Pactolus, which, while it flows with gold, yet transforms into iron the hearts of all who plunge into its sparkling waters.

TO MAKE PEA VINE HAY.

MESSRS. EDITORS—May I trouble you with an article on the Pea Vine, as an article of great value to the Southern man, whether he be a farmer or planter? I have never found any production yield at the South so abundant a crop as the cow pea; and hoping it may throw *some light* on your many patrons at a time when corn and provender of all kinds are scarce, is my reason for sending you the following article on its culture and preservation: Sow the cow peas in drills from two and a half to three feet apart. Sow as soon as you consider the vine will escape the late spring frost. When the vine grows to the length of three or four feet, sow another row in the middle of the former row, after which pull up the pea first planted (putting them in convenient bundles for throwing up in stacking. I do not mean to tie them.) During the morning, and after they have wilted sufficiently to prevent them from breaking, which will be in the afternoon, you may commence to stack them in the following manner, viz: Cut a pole ten feet long and four to six inches in diameter, and with a blacking or chalk line, make a mark from top to bottom, then half turn and make another; and with a rule lay off (with a scribe awl) points eight inches apart, and at each point bore a hole with a two inch augur, then half turn and between each of the other holes scribe and bore other holes. Through each hole insert a long arm, say four or 6 feet long, projecting 2 or 2 feet on either side, then insert the large end of the pole into the ground at least two feet, packing well the earth around the pole (like a fodder-stack pole). Then commence and hang the wilted pea vines on each arm, commencing at the lowest arm and go regularly up, filling each arm well up to the arm above, and so continue to the top. Place on the top rye, wheat or fodder to cap it, to turn off the water; and as soon as the vines have had time to dry, you will find considerable space between the peg above and the vines below, which will have shrunk in drying, and thus air is admitted.

The advantages of thus saving the vines are that they may be put up in wet weather; and, also, if the vines are dried in the sun all the leaves will fall off in hauling and stacking. I do not give this as original, but to let you know that I have tried it and find it very valuable for horses and cows. In this way two or three crops of vines may be raised off of the same land the same year, and the land be still as good or better than at first; and lands

which will bring little else, will produce you one or two crops a year, and a grain crop in the winter.

Respectfully,
South Bend, Ark., 1855. JAS. L. GORRE.

CALIFORNIA PINE TREES.

We often hear the big trees of California spoken of, and we wonder and doubt if the stories be true, and the California papers seem to be proud of their "tall" pines, and to delight to make us "open our eyes" at their marvelous dimensions. The *Placer Times* mentions a spruce pine log, twenty-six feet long, which turned out 4,000 feet of clear stuff, without knot or windshake. The tree made 13,000 feet clear lumber. Trees of other species are much larger—for instance, the red-wood—some of which turn out upwards of 100,000 feet. One such tree would build two houses, each two stories high and fifty feet square, furnishing all the square timber, planks, shingles, etc. The following account of big trees seem almost incredible: "One of the trees is named the 'Father Pine.' This is dead, and has fallen to the earth. Its dimensions are as follows: length, 400 feet, circumference, 110 feet. The trunk of this tree is hollow, which has been traced for a distance of 250 feet. There is a little pond of water in the centre of this cavity four feet in depth. The tree, 250 feet from the stump, is no less than 12 feet in diameter. The cluster, called the 'Three Sisters,' taken together, are 92 feet in circumference, and 300 feet in height. The centre is bare of branches for 200 feet above the ground. The 'Mother Tree' is 91 1-2 feet in circumference, and 325 feet high. The 'Mother and Son' are 92 feet in circumference, and 300 feet in height, united at the base. The 'Twin Sisters,' 100 feet in circumference, 300 feet in height. The 'Pioneer's Cabin' is a remarkable curiosity. This tree has been partially burned; the result of the scorching is the dividing the trunk into several compartments, which are known as 'parlor, bed-room and kitchen.' The hollow, which is 200 feet in height, is called the 'Chimney;' the tree is 85 feet in circumference. The 'Siamese Twins,' 95 feet in circumference, and 325 feet in height. 'Guardian of the Times,' 85 feet in circumference, and 325 feet in height. The 'Old Bachelor,' 81 feet in circumference, and 275 feet in height. The 'Old Maid,' 76 feet in circumference, and 275 feet in height. 'Uncle Tom's Cabin,' 84 feet in circumference, and 300 feet in height. 'Pride of the Forest,' 87 feet in circumference, and 300 feet in height. 'Two Friends,' 85 feet in circumference, and 300 feet in height. These trees are all embraced in an area not exceeding one half mile in extent."

WHEAT AND FLOUR IN TEXAS.

The *Houston Telegraph*, speaking of the wheat-growing capacities of Texas, says:

The great wheat-growing region of Texas lies principally north of the 31st parallel of latitude, though very fine and heavy wheat, with a yield of 30 bushels per acre, has been grown south of it. The principal production is now confined to the counties on Red River and the upper Trinity, where a surplus is grown and extensive preparations are making for flouring it and sending southward for a market. On Pleasant Run, in Dallas county, 15 miles south of the county seat, there are three flouring mills, two of them having two run of stone each, and capable of grinding about 1200 bushels in 24 hours. The present price of wheat delivered at these mills is \$1 to \$1.25 per bushel, while flour commands \$12 to \$14 per barrel. At these figures the profits from flouring will rapidly bring into existence a sufficient number of mills to grind all the wheat that can be produced, while the farmers at \$1 per bushel, will make more money than in the cultivation of

cotton. This is a most gratifying prospect not only to the farmers in that section, but to the State at large. At present our importations of flour are very heavy. Not less than 300 barrels are sold on the average per week, in this market. At that rate, at present prices, about \$110,000 per annum goes out of the State from this city alone, for an article that can be produced so easily at home, and with more profit than cotton.

PROFITS AND PLEASURES OF FARMING.

THE Houston (Texas) *Telegraph* gives us the "bright side" of farming, in this wise:

People living from hand to mouth in towns, working the year round, spending half they earn in things that are useless, if not injurious, have very little idea of the cheapness of a good living and a thrifty homestead in the country. A mechanic will earn in town from \$2 to \$3 per day, amounting to from \$600 to \$900 per year, but with a family to feed and clothe, and children to educate, he must be a very steady and frugal man to have a dime ahead, or even to be out of debt, at the end of the year. All of this, however, has nothing to do with the profits of corn planting except by contrast.

Good farming land can be brought within five miles of this city at from \$2 to \$5 per acre. The following is a fair estimate of the cost of a farm of fifty acres, including cheap, but comfortable improvements, a small start of team, utensils, cattle and provisions to last until a crop is made:

Fifty acres land \$5 per acre.....	\$150 00
Two yoke of oxen and cart.....	120 00
One horse.....	40 00
Five cows and calves and a supply of hogs and poultry.....	100 00
Labor of extra hand in building log house.....	20 00
Lumber for flooring, doors, nails, &c.....	25 00
Labor and board of extra hand in getting out rails for 25 acre field.....	60 00
Twenty-five bushels corn.....	25 00
Provisions for six months.....	150 00
Plows, axes, &c.....	25 00

Total outlay.....\$715 00

CONTRA.

By 20 acres corn 600 bushels \$1.....	\$600 00
By 4 acres sweet potatoes 300 bushels 75 cents.....	225 00
By butter, eggs and poultry.....	100 00
	\$925 00

According to the above estimate, he has made \$125 over the entire expenditure and has besides accumulated an available productive property to the value of \$505. He has now laid a foundation on which any industrious and prudent man can easily and rapidly build an independence for his family. His horses, cattle, hogs, poultry, &c., are better investments than was ever made in goods, houses or stocks of any sort. They will pay their own expenses and yield a profit at the most moderate calculation of 20 per cent. per annum, compound interest, and without any risk, such as attend other investments.

The above calculation is for an industrious and economical man; a lazy one has no business in town or country and will do as well in one situation as an other, and we don't know of any way by which he could possibly better his condition.

THE RICE WEEVILS.

This insect is the *Curculio Oryzae* of Linnaeus. It is a well known fact that the amount of injury done to stored rice by this insect is such as to cause much loss by those persons who have in their possession large quantities of that article. The insect is coleopterous, or, in other

words its wings are protected by *elytra* or sheaths. This little depredator much resembles the Wheat weevil (*Curculio granarius*, of Linnæus,) and, indeed, it is sometimes known to attack stored wheat. A well known writer on American entomology has justly remarked, that if this insect increases numerically in stored rice, all possible means should be made use of to prevent its ravages. I feel perfectly satisfied, from close observation, that it does increase, and to such an extent, in some cases, as to prove alarming in its character. There is a simple remedy, however, and it is not merely theoretical, but practical experiment has shown that it is entirely effectual, which will prevent their injurious effects. It is this:—To every two bushels of rice, apply at the time of storing, one pound of common salt (Chloride of Sodium,) and you need have no fears in relation to the ravages of the Rice Weevil. The same remarks apply, as a general thing to the storage of wheat.

A CHEAP COTTAGE.

Mrs. SWISSHELM gives us the following plan of a cottage, to be built at a cost of not more than one hundred dollars:

As many may doubt that a house can be built for so little, let me give some description: When logs are plenty and convenient, it is my impression a snug little house, 16 or 18 feet square, could be put up and made comfortable for less than one hundred dollars; but where they are not to be had, ordinary laboring men can build a nice little board house by placing four sleepers on stone rests; nail boards to these, upright, first at the corners; have scantling of lengths to correspond to the sleepers; fix them seven feet above by props until the top ends of the boards are made fast to them, when the prime difficulty of the building process is over. Side it up with boards running up and down, nail strips over the cracks outside and in; lath to the inner strips and put one coat of plaster as smoothly as possible, which will make it close enough. Let the front and back wall be seven feet high; fix cross ties half way up the roof for the ceiling, and the room will be high enough for comfort and health. The cheapest and most suitable roof is rough flooring boards, the grooves filled with a mixture of two thirds coal tar and one third linseed oil, giving the whole a thorough coating after it is put on, and sprinkling it thickly with sand. By having the roof extend over one foot or eighteen inches, and putting brackets under, making a window and door in front, a window in one gable with a hood over it, a chimney in the other, a door at the other side with a little rough porch over one or both doors, the outside white washed and a tree partly shading it, a house of sixteen or eighteen feet square would be pretty and attractive.

DANGERS OF A HIGH PILLOW.—It is often a question among people who are unacquainted with the anatomy and physiology of man, whether lying with the head exalted, or even with the body, be more wholesome. Most, consulting their own ease on this point, argue in favor of that which they prefer. Now, although many delight in bolstering up their heads at night, and sleep soundly without injury, yet we declare it to be a dangerous habit. The vessels through which the blood passes from the heart to the head are always lessened in their cavities when the head is resting in bed higher than the body; therefore, in all diseases attended with fever, the head should be pretty nearly on a level with the body; and people ought to accustom themselves to sleep thus, to avoid danger.—*Exchange.*

The annual product of Hemp in Kentucky, is estimated at fifteen thousand tons, and in Missouri at ten thousand tons.

RANDALL'S COTTON PLANTER, &C.

MESSRS. EDITORS—In the last *Cultivator* you ask for information of Randall's Cotton Planter. Mr. JAMES WATSON, of Palmyra, Lee Co., Ga., was the builder of said planter, and is now, I believe; if not, can give all the information needed.

You will greatly oblige me by answering the following: Is land injured by deadening the trees on it in the summer or, as we say, when "the sap is up?" The common opinion and belief among planters is that it is. Again, would there be any difference, in deadening Pine and Oak land in the summer?

Will you answer in April number?

Truly,

REBEK.

Hopehazy, March, 1855.

REMARKS.—We have no practical knowledge of the effect upon land of "girdling" or "deadening" trees. Will some of our experienced correspondents answer REBEK?—EDS.

TO WORK THE WORST SPOILED HORSE.

MESSRS. EDITORS—Place gear on the horse, the backband as far back as his kidneys; the belly-band at the usual place. Have the traces short, that the singletree can only pass the root of the horses tail, and stop 6 or 8 inches above his hocks. The gear should be strong, and well secured at all points. It is best to have the horse secured in his stall for a day or two before leading him out, that he may become used to the gear, and less liable to kick. The beauty of the thing is, the singletree binds so close to his hams, that it prevents the play of his heels. When you discover your horse will bear the touch of the singletree and gear, you may then attach plow lines with gear and place a drag, and practice him until he will bear the plow or wagon.

I have adopted this plan for more than twenty years without a single failure to gentle the worst runaway animals I ever knew, in fact, they cease to kick and become gentle at once. Yours truly, BIRD SAFFOLD.

Seguin, Guadalupe Co., Texas, 1855.

TO CURE FISTULA IN A HORSE.

MESSRS. EDITORS—Open the fistula as soon as the sack of matter has collected—the sooner the better. Take 48 grains of corrosive sublimate, and dissolve it in 2 oz. of water, which is all it will hold in solution. Soak a slack twisted cotton string, just such as are used for country candle wicks, 8 1-2 inches long, in the solution 24 hours, letting 6 1-2 inches of one end of the string be immersed in the solution; then insert 6 or 6 1-2 inches of the saturated end in the orifice and push it down with a blunt probe or stick, letting 2 to 2 1-2 inches of the dry end hang out. Let it remain in 24 hours, and put a fresh one in every 24 hours, drawing away the old one. A new string should be put in soak in the phial of solution as soon as one is taken out. Continue this until but little matter is discharged and that little very thick. Grease the shoulders to let the matter slide off.

I have never failed with the above remedy to accomplish all I could reasonably desire, and without leaving a scar.

MECKLENBURG.

Como, Miss., Jan., 1855

ENCOURAGEMENT OF AGRICULTURE.—A bill has passed one branch of the Missouri Legislature proposing, in order to encourage the formation of Agricultural Societies, to grant to each county forming such an association the sum of \$100 for each \$300 subscribed by them, provided the whole amount should not exceed \$100 in any one year.

WHITE HAIR AND NEGRO WOOL.

AT a recent trial in South Carolina, in which the point in dispute—property in a mulatto girl—rested on a question of race, Dr. Gibbs, an accomplished Ethnologist and Physiologist, gave the following interesting evidence with regard to the hair of different races:

He handled a negro skull and demonstrated clearly the peculiarities, and showed, by comparison, the marked difference between them. He explained the prominent difference between the anatomical structure of different parts of the body, and gave an exceedingly interesting account of the distinction the hair of the Caucassia, Indian and Negro races. He stated a very curious fact, as resulting from microscopical observation, that in the mulatto cross the hair of one or the other parent was present, and sometimes hairs of both, but never mongrel hair; that no amalgamated hair existed; that as often the mulatto had straight hair as kinky. He stated the microscope revealed that the hair of the white race was, when transversely divided, oval, that of the Indian circular, and that of the negro eccentrically elliptical, with flattened edges, that of the negro was not hair, but wool, and capable of being felted; that the coloring matter of true hair was in an internal tube, while in the negro it was the epidermis or scales covering the shaft of the hair.

In corroboration of this statement that both white and negro hair were sometimes found in the same head, a singular case was mentioned by Dr. Gibbs. He stated that he once attended a half-breed Indian and negro, who had straight Indian hair. He was ill, and had his head shaved and blistered. On his recovery, when his hair grew out, it was negro hair—crisped and wiry.

TANNING.—A process of tanning has been patented in England by a Mr. Preller, which makes no use of bark whatever.

The substance employed consists largely of starch, butter-milk or grease, with salt or saltpetre. The skins are smeared with these and then agitated in a revolving cylinder for a certain length of time, when they are ready for the currier. Mr. Preller has erected a large factory at Southwark, where he is carrying on the business of tanning by this method, and his leathers have already attained a high reputation in the market. They are pronounced greatly superior to those tanned in the usual ways for their strength, flexibility, uniformity of texture, and durability. The weight of the leather is greatly reduced, at the same time that its strength is increased. This done to such a degree that while oak tanned leather of three-eighths of an inch in thickness is incapable of a strain, which Preller's leather one-fourth of an inch in thickness will bear with constant working. A strap of it a yard long and an inch in width and one-eighth thick gave way with a weight of 6 cwt., 20 lbs.; while ox hide, well tanned with bark, of the same dimensions, only bore a strain of 5 cwt.

It is said that sheep skins tanned in this become of a surprising strength, though as commonly prepared they have scarcely more strength than good paper.

Tanning by this process only requires a short time to perfect it. The thickest ox hide is perfectly tanned in two days and a half. The leather thus made is also more impermeable to water than as commonly prepared. These statements are given by the *Mechanics' Magazine*, and, if sustained by the facts, will go far to change the relations of leather to society.

SOME GOOD EVERYWHERE.—Bayard Taylor, the traveler, says that he prefers Mexico for the beauty of its scenery, Germany for its society, California especially for its climate and the United States for its Government.

WHEAT IN AMERICA.

WHEAT was first sown in the American Colonies in 1692, on the Elizabeth Islands, in Massachusetts, by Gosnold, at the time he explored that coast. That has been just 262 years ago, and since that time so great has been the increase of this cereal, that in the 1849, according to the census of 1850, the product amounted to 100,503,899 bushels. Up to 1610, and perhaps later, England supplied the colonies with the greater part of their bread-stuffs. How changed is it now! All Europe is looking to us for bread. The bread sent to the colonies in 1610 was not cast upon the waters never more to return. Two hundred and forty years afterwards it rolls back in a continuous stream, to gladden the hearts of half-famished millions in England, France and Belgium. The descendants of men originally lashed and scourged from their shores, and forced to make their future habitations beneath the uninviting sky—more humane than the task masters of their fathers—are now striving to return good for what was considered an evil, by supplying them with bread.

POULTRY MANURE.

THE horticulturist cannot value too highly the droppings of poultry. For the past two or three years I have tested fully its properties, and feel satisfied that one bushel of poultry manure mixed with plaster, and used as a top dressing, is equivalent to ten bushels stable manure put into the ground in the usual manner. It is particularly valuable for onion sets, as well as for almost every other garden vegetable. My process for its use is this:—I dig and plant my seed, and in the course of a few days, or about the time I think the seed is beginning to germinate, I take the manure, previously mixed with a small portion of plaster and put upon the hills or beds containing the seed. By the time the shoots come up the manure is in a proper state for working, it having decomposed by losing much of its ammonia, and I find it requires less labor to keep the ground loose than when not used, to say nothing of its effects upon vegetation, which are incalculable. The season for saving this manure is now at hand, and I feel satisfied that if once tried will never be abandoned, if the manure can be had.

I might also state in this connection that in consequence of the attacks of the striped bug upon the cucumber plant it has become almost an impossibility to cultivate that much admired vegetable. By the use of *air slacked lime*, sprinkled every few days over the plant, their ravages may be checked, and the horticulturist find no difficulty in raising any quantity of the vegetable. The same remedy will apply to pumpkin and squash vines.—*Pa. Farm Journal*.

INQUIRY.

MESSRS. EDITORS—Can some of your numerous subscribers tell us the causes and a remedy for the "Hollow-Horn" in cattle? I know some will say it is the hollow belly, or want of attention and care; but with such I must differ, for I had four work steers that had it last year, and I always keep my oxen in good order, well fed, and not abused, to which my neighbors will testify. A preventive and remedy is anxiously sought after by

A SUBSCRIBER.

Hayneville, Ga., 1855.

SUGAR IN LOUISIANA.—The *Plaquemine Gazette* of March 3, says:

The prospect of the next sugar crop in this State, is anything but promising. We have conversed with a number of the best Planters in this District, who are of the

opinion, that the crop of 1855, will be a short one. From the Point Coupee *Echo* it will be seen that this is not the only Parish in the State that has lost seed cane. The *Echo* says:

The plant cane is, we regret to say, seriously injured in this parish. If the dry weather continues two or three weeks longer, it will be impossible to plant half the sugar lands of the parish.

We republish the following, by request of a fair housewife of our acquaintance:

HOW SHALL WE PRESERVE EGGS?

This is the "*grand question*." We have, in the course of our life, tried nearly all the expedients that have been recommended, and sometimes succeeded, and sometimes failed—from which results you will say it is no more than fair to conclude that none of the methods are infallible. We have learned one fact by these experiments. Eggs should be perfectly fresh when you begin to preserve them. If an egg has commenced, even but a very slight decomposition, it is difficult arresting it; indeed, we are inclined to think nothing short of freezing will do it. The following very simple plan we have never tried, and know nothing practically whether it be effectual or not. We found it in the *Farm Journal*, quoted from the *English Agricultural Gazette*. We pass it over to our readers for their consideration:

Take a half inch board of any convenient length and breadth, and pierce it as full of holes (each one and a half inches diameter) as you can. I find that a board two feet and six inches in length, and one foot wide, has five dozen in it, say twelve rows of five each.

Then take four strips two inches broad, and nail them together edgewise into a rectangular frame of the same size as your other board. Nail this board upon the frame and the work is done, unless you chose to nail a beading around the top.

Put your eggs in this board as they come from the poultry house, the small end down, and they will keep good for six months, if you take the following precautions:—Take care that the eggs do not get wet, either in the nest or afterwards. (In summer hens are fond of laying among the weeds or grass, and any eggs taken from such nests in wet weather, should be put away for immediate use.) Keep them in a cool room in summer, and out of the reach of frost in winter. If two boards be kept, one can be filling while the other is emptying.

The writer accounts for the preservation of eggs in this way by supposing that the yolk floats more equally in the white, and has less tendency to sink down against the shell, than when the egg is laid on one side—certainly, if the yolk touches the shell it spoils immediately.—*Maine Farmer*.

ECONOMY IN WIVES.—A young married woman, who has not had the opportunity of profiting by the advice and example of a good mother, will find some difficulty at first in spending her money to the best advantage; for there is really an art in spending money, though it is getting rid of it. Some women will keep house respectably and plentifully on one-third less money than will be required by others, or without even meanness or illiberal dealing. But to do this, judgment, forethought and experience are necessary. One woman shall be able to tell you how much her housekeeping costs to a shilling, while another cannot guess within ten. The former has method, rule, regularity, and a certain sum assigned to her; with the latter it is all hazard—it comes and it goes, she neither knows how, nor cares. And this is almost sure to be the case if the money is doled out by her husband in a few shillings at a time.

HOW TO BE HAPPY.—In my apprehension, the best way to be useful and happy in this life is to cultivate domestic affections—to love home, and at the same time to be temperate and just—to pursue lawful business whatever it may be, with diligence, firmness and integrity of purpose, and in the perfect belief that honesty is equally as binding in the discharge of public as private trusts; for when public morals are destroyed, public liberty cannot survive.

Horticultural Department.

WORK FOR THE MONTH.

[APRIL, (Latin, *Aprilis*) is so called from *aperio*, "to open," in allusion to the opening of the young buds of trees or flowers, and the general development of vegetation at this season. This is the only month whose present name seems to have reference to the season in which it occurs. It corresponds to the Jewish, *Zif* or *Ziv*, (1 Kings vi, 1,) the eighth of their civil and second of their sacred year. Its Saxon name was Eoster, or Ostor-monath; "Ost" signifying East, and the winds, by ancient observation, being found in this month most commonly to blow from the East.]

THE PLANTATION.

PROVISIONS of all kinds still continue scarce and dear, and as it is likely that vast quantities of grain will be needed for exportation, we repeat urgently our advice of last month, viz: to plant heavily of Corn, Sweet Potatoes, Cow Peas, [See article on curing Pea Vines, in present number,] &c., &c. It is probable that most of our readers have already planted Corn, but if planting has been delayed by any untoward circumstances, lose not a moment now in getting a large crop into the ground. Plow deep and manure heavily—plant the earliest and heaviest seed you can obtain, and as soon as the young plants have made sufficient growth, thin out to the proper "stand" and give the ground a thorough working. A great deal depends upon the after-culture of Corn (supposing it to have been properly planted at first) and, in this connection, we would call attention to the suggestions of our practical and intelligent correspondent, "M," on page 108.

Having fully finished the planting of your Corn crop, take hold and complete, without delay, the planting of Cotton. We would urge upon our readers the necessity of deeper and cleaner culture than they generally give this all important staple. Unfortunately, every man thinks his own system of "making cotton" the best known, and is seldom willing to profit by the example of even his more successful neighbor. The problem of making, year after year, a paying crop of cotton, without greatly impoverishing the land that produces it, is one that very few have yet solved. That it can be done, we have not the least doubt; but until the generation of anti-progressionists passes away, we have no hope of seeing it. Ultimately it must come, or Cotton culture will have to be abandoned; for with the vast yearly increase of our population, it will not take long to exhaust and wear out all the available new lands in the Union. We would say, then:—Do not try to "cover too much surface" with this crop, but do well whatever you attempt. Better 40 or 50 acres well cultivated, than 2 or 3 hundred merely "scratched" over. Plant only the "improved" varieties, and remember that one bale of fine, long staple, carefully handled and properly ginned, will bring as much money as two bales of indifferent, specked and foul "dog tail."

Continue to set out Sweet Potatoes—both "sets" and "draws." Ridges for sweet Potatoes should not be thrown up until you are ready to plant. Plow the ground deep

and well, and harrow finely, before ridging up. Plant Melons, Pumpkins, Squashes, &c. Sow Millet, Downy, and common Corn for fodder, in drills, once every fortnight or three weeks, until late in the summer—you cannot make the ground too rich for these forage crops, so do not be afraid to put on the manure.

THE VEGETABLE GARDEN.

Whatever you have been prevented from doing last month by unfavorable weather, or other causes, must now be attended to promptly, or it will be too late. The young weeds, "nut grass," "joint grass," &c., &c., will now begin to dispute possession of the ground with your early vegetables, and unless you attack them vigorously, and keep them under, they will be sure to get the start of your crop.

Set out early Cabbages, Peppers, Tomatoes, Egg Plants, &c. Transplant Lettuce. Force your young vegetables into vigorous and rapid growth, by repeated applications of liquid manure—to prepare which, use 4 quarts of well rotted stable manure; 4 quarts of hen-house manure; 3 gallons of chamber-ley, and 2 quarts of finely pulverized guano, to one barrel of rain-water, keeping the barrel covered, and the liquid well stirred up. Saturate the earth around your plants occasionally with this compound from the rose of a watering-pot, early in the morning, or late in the afternoon, not allowing the liquid to fall on the plants. Plant Watermelons, Musk Melons, Cucumbers, Squashes, &c., &c. Plant pole Beans, such as the Lima, or "butter bean," &c., four feet apart each way. Also, bush or dwarf Beans, may be planted now, dropping them from two to four inches apart in the drill. Sow a full crop of Okra in a rich, well drained spot, in beds or ridges four feet apart—dropping four or five seeds in each hill, and three feet apart on the ridges. When well up, thin out to a single plant, leaving the most thrifty. Keep the earth around them well worked, and haul a little soil around the stems of the plant from time to time. The "Dwarf" or Prolific Okra is the finest variety we know. It needs no "topping," and often produces over 100 pods on one stalk. Sow Red Cabbage, for pickling. Sow Cauliflowers and Brocoli early this month, for a full crop. Sow, also, in warm borders, in the open ground, Tomatoes, Peppers, &c. Sow Radishes, in a deep, light soil, every three weeks, for a succession. Sow Citron Melons and the small Glass Melons, for preserves. Cultivate these as you would the Water or Musk Melon. Plant Gherkins in the middle of this month, and cultivate like Cucumbers. Plant an abundance of the different culinary herbs, such as Parsley, Savory, Marjorum, Fennel, &c.

THE ORCHARD.

Examine your Peach trees closely, and if any borers yet remain under the bark, just below the surface, remove the earth and dig them out carefully with a thin, sharp-pointed knife or a piece of iron wire; then apply to the excoriated bark (with a white-wash or large paint brush) a mixture composed of 10 parts of lime; 5 of ashes; 2 of salt, and 2 of coal or gas tar. Let all these ingredients (except the tar) be mixed with water until the wash is of the thickness of cream—then stir in the gas tar, and apply the mixture with a liberal hand, from the top or main roots to the height of 10 or 12 inches above the surface. When the wash dries and hardens, fill the cavity or basin around the tree with fresh earth and heap it up around the trunk 8 or 10 inches above the surface. Work or loosen the earth around your fruit trees—apply a good coat of well rotted manure—destroy all suckers—cut out dead wood, &c., &c. Caterpillar nests will now begin to be distinctly visible; and now is the time to destroy myriads of them. Take a long, light pole—drive into one end of it crosswise, (a quarter of an inch apart, and on all sides,) 8 or 10 large nails. Let a boy pass along the rows of fruit trees, pole in hand, and whenever he espies a nest, a thrust

of the pole and a downward twist will bring the nest and its inmates to his feet, when they can easily be crushed and prevented from spreading. *Budded trees* of last year, should now be headed down to the bud, and all shoots below the latter removed, so that it may have the full strength of the stock. *Cuttings* of the Quince, Fig, Pomegranate, &c., should be treated in a similar manner, viz: all buds but the strongest, or leading one rubbed off with the fingers—the ground kept loose and mellow, and mulched with straw or leaves, during the summer months.

THE FLOWER GARDEN AND SHRUBBERY.

Sow seeds of hardy *Annuals* in borders, and thin out to proper distances, when sufficiently grown. *Dahlias* that have been started in pots, may now be set out in the open ground; and tender annuals may now be pricked out from the hot-bed, the latter part of this month. *Evergreens* of all kinds, may now be transplanted; in doing which lift a good ball of earth with the roots, apply water copiously when planting, and keep the ground around their stems well mulched with pine straw or other leaves. Water frequently afterwards.

THE DIOSCOREA JAPONICA, OR JAPANESE YAM.

The introduction of this excellent vegetable into France and the United States, and the cultivation of it as far as known, is worthy the attention of all. The *Dioscorea* is destined by its delicious taste and great productiveness, to replace, in a great measure, the potato. It is a native of Japan, and is cultivated there and in the north of China, in great quantities, and feasted upon by rich and poor, all the year round. This remarkable vegetable was introduced into France in the year 1849, by M. Mautreppey, then Consul of France in China. It was given him by a missionary. Mr. M. sent it to the *Jardin des Plantes*, where it remained unnoticed (as it did not flower,) until his return to France in 1853, when he was perfectly astonished to find so invaluable an article still uncultivated and in all the markets of France.

A friend of mine, M. Palliet, (who by the way is a regular wide-awake horticulturist,) being acquainted with Mr. M., and hearing him describe its great merit, set to work in earnest, and propagated between 50,000, and 60,000 the first year; and is preparing to cultivate it in all the different departments of France. Some of the roots were sent, last June to the great Horticultural Exhibition in Paris, and gained for Mr. P. the award for the introduction of the most useful plant, beside which, the "Ministre de Agriculture," presented him with 3000 francs. Some of the roots weighing two and a half pounds a piece, were presented to his Majesty, the Emperor; they were eaten by the Emperor and Court, and pronounced excellent; after which Mr. P. received an order for 40,000 to be distributed throughout France.

The cultivation of the *Dioscorea* is very simple, not requiring as much labor as the potato. It will do well in any soil, but light or sandy is preferred, as they will be more mealy than when raised in heavy bottomed land. The roots are cut about 2 inches long, and planted 10 or 12 inches apart—in rows, and kept clear of weeds until ready to dig, which will be in October and November. If left in the ground two years, it will go on increasing, and the root will improve in quality. If kept dry, they will keep 8 and 10 months out of the ground, which will be a great advantage, especially for shipping purposes. It is estimated that the *Dioscorea* will exceed any other produce.

It may be remarked here that the inner part of the root is a fine white, very mealy—very agreeable to the taste, resembling the arrow-root, and can be cooked in 10 minutes. Its growth and outward appearance, resemble the

sweet potato, and there is no doubt it will be cultivated more extensively than that excellent vegetable, as it possesses the advantage of being hardy, and of being kept a much longer time. I have a drawing, and will have a few plants, which can be seen at my establishment. It is unnecessary to say any more at present, as M. Palliet is about publishing a treatise upon the subject, for the opening of the Paris Industrial Exhibition in May next, which any person can obtain a copy of, by applying to me.

When in Paris last summer, I had the pleasure of seeing the *Dioscorea* under cultivation.

D. BOLL,
Broadway and 50th street, New York.

[Country Gentleman.]

NEW ROCHELLE MAMMOTH BLACKBERRY.

F. TROWBRIDGE thus speaks of this valuable new Blackberry, in the March number of the *New England Farmer*:

I noticed some remarks in the January number of the *N. E. Farmer*, in regard to the price of the New Rochelle Blackberry. The price at which they are sold is by no means extravagant, as they are only propagated by shoots from the roots, which, all must be aware, is a slow process. The only two persons who raise them for sale—Mr. Lawton, of New Rochelle, and George Seymour & Co., of Norwalk, Ct.—are trying to raise for their own transplanting; for, after the first or second years' transplanting, each plant will raise more than a dollars' worth of fruit, and the demand for the fruit is greater than the supply, and will be for years to come.

I exhibited last season, in New Haven, from Messrs. Geo. Seymour & Co., at our Horticultural Exhibition, very fine specimens. One of the berries measured four by three and a half inches in circumference, the size of a pullet's egg. Some of the specimens were taken from a plant in a Mr. Smith's private garden in Norwalk. I think it had been planted out three or four years, and should judge it had on it nearer one-half a bushel than a peck of berries; so that a dollar a plant cannot be a very great price under these circumstances.

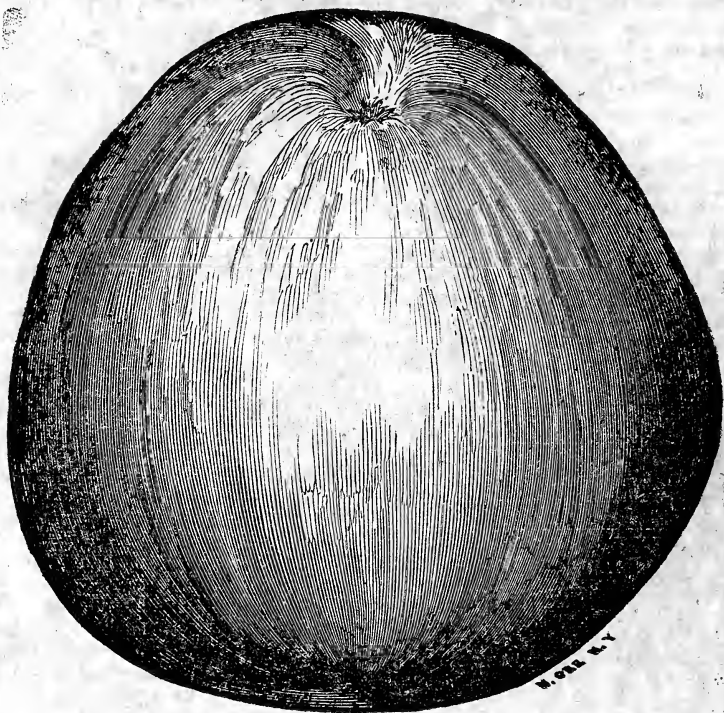
Mr. WM. LAWTON also gives us the following account of this Blackberry:

"This variety of the Blackberry is entirely new, differing in shape, size and quality, from any of which we have any account. As far as my experience extends, it will endure our severest winters without protection, and requires no particular care in the cultivation. The fruit is delicious, having few seeds in proportion to its size;—and in any locality, in good soil, the flower, leaf, stalk and fruit, will grow of mammoth proportions; and in addition to all, is an abundant bearer.

Nature of the Plant.—It delights in moist soil and shade, and in such situations will continue longest in bearing. Like the raspberry, it produces from the roots, during the summer, a plentiful supply of shoots for bearing the ensuing season; while the old shoots advance, gradually cease to elaborate frequently before all the fruit upon them has fruiting season continues from five to eight

Management in the spring.—Vigorous with numerous laterals will be found mingled with dead—remove the latter as early as possible, and shorten the leading shoots one quarter or one third their length, and where the latter are too long, clip them also. If judiciously pruned, they will require no support, and not being entangled they can be better approached to gather the fruit.

Making Plantations.—They may be planted in the spring or fall—in all cases let the plants be four or five feet apart; if in rows, separate the rows twice that distance.



SOUTHERN SEEDLING APPLES--- No. 7.

CULLASAGA APPLE.

"This Apple was raised from the seed of a Horse Apple, by Miss ANN BRYSON, of N. C. It is an apple of first rate quality; of a pleasant sub-acid flavor, and highly aromatic—fully as much so as the *Spitzenberg* or *Newtown Pippin*. It is of good size, frequently large; keeps well, and is recommended by a Committee of the Southern Central Agricultural Society, as first-rate, and worthy of the attention of every fruit-grower.

J. VAN BUREN.

Clarksville, Ga., 1855.

A NEW PLANT—CHINESE SUGAR CANE.

A PLANT, bearing a close resemblance to Indian corn, has been introduced into France from the north of China. It is called *Holcus saccharatus*, or Chinese Sugar Cane. Experiments made in France indicate, it is said, that it will yield more sugar, to the same extent of land, than the sugar beet. It is there attracting great attention from distillers. We are not aware that it has been tried in this country, but it would, doubtless, succeed well in the Southern States, and deserves to be tested, if only for food.

Mania Farm Journal gives us the following:

...exchanges advise us of a new plant under ... being introduced into France from the ... which promises to be of considerable value. A pamphlet has been published on the subject by M. Louis Vilmorin, of Paris, who is considered high authority, from which it appears that the juice of the *Holcus* furnishes three important products, sugar, alcohol and a fermented liquor analogous to cider; and that it may be profitably cultivated for sugar in any region between where the sugar cane ceases to thrive and the forty-fourth degree of latitude, and that *elsewhere* it will be profitably cultivated for its alcoholic products.

"He obtained from stems, from which the peel had been

stripped, at the rate of fifty-five to sixty per cent. of juice. The upper joints and spikes were only cut off, but by cutting off more and subjecting the stems to a better process of crushing, he thinks that seventy per cent. of juice could be obtained. The quantity of stems employed, large and small together, was 553 lbs., giving twenty-three gallons of juice of the density of 1.052. The quantity of sugar from the *Holcus* is estimated higher than from the beet root, but involves more labor and expense to extract, and the quantity of spirit exceeds that from beet root by about sixty gallons per acre. The amount of juice yielded from an acre is about 1207 gallons.

"The refuse also consists of excellent fibre, easily extracted and easily bleached, and worth at least \$50 per ton to the paper makers, and probably much more.

"A more detailed account of the process of cultivation in France is about to be published."

GOOD ADVICE.—The Albany (N. Y.) *Knickerbocker*, says:

"The best cure for hard times is economy. A shilling's worth of white beans will do as much feeding at fifty cts' worth of potatoes; while six cents' worth of Indian meal will make as much bread as fourteen cents worth of flour. Besides this, it is twice as wholesome. Almost every family in town could cut down their expenses one-half if they only chose to do so."

SOUTHERN SEEDLING APPLES.

WILLIS M. LEA, Esq., of Holly Springs, Miss., writes us as follows. We shall be happy to hear from Mr. L., at greater length hereafter, upon this interesting subject:

"At a future day, I may be tempted to say a word about some fine Southern Seedling Apples, especially if Mr. VAN BUREN continues to stimulate inquiries in this line by his valuable contributions. I am convinced that we all ready have varieties sufficiently numerous and valuable to furnish us with superior fruits all the season. I have repeatedly furnished our friends with the May Apple and Red Astrachan, &c., on the same waiter with the winter Apples of the previous year—the 'Hall Seedling,' 'Stephenson's Seedling,' &c. And I am fully convinced from experience, that additions to the winter varieties are only to be expected, from the region in which we ourselves live, or, at most, from those similar in climate and not too dissimilar in soil, &c. But I have not the purpose to write at any length at present; so adieu.

OSAGE ORANGE HEDGES.

Mr. H. P. BYRAM, the agricultural editor of the *Louisville Journal*, writes to that paper from Dayton, Ohio, under date Sept. 9, 1854:

"In the vicinity of this city, I saw some of the most perfect specimens of the Osage Orange hedge that I have ever before met with—more perfect, indeed, than I supposed nature could produce, even with all the aid that art and industry could lend her. The plants seem to withstand the blighting effects of this unusually dry season, better than any other species of vegetation. The leaves still present the same rich glossy green that characterises this plant in our most favorable seasons.

"From a somewhat extensive acquaintance with the character of the Osage Orange plant, I have often pronounced it the hedge plant of America, but I had no idea of the degree of perfection to which I find it susceptible of being trained in the hedge. The oldest of the hedges here now is about four years. It is four feet high and three feet broad at the base, and as dense, compact and uniform from the ground to the top, as if it had been moulded by hand from some plastic material. My attendant remarked that it was 'so close at the bottom, that a snake could not find its way through it.' There were several other specimens in the same vicinity, from one to two years old, all presenting the same beautiful appearance.

"The great and only secret in producing this living American prairie fence is, *clean culture for four years, and a single winter shearing*, from the period of setting the seed, and then to maintain

of the *Cultivator*, and all who may order. Those wishing this can address Capt. Brooks (post paid) and he will furnish young grafted trees, with mode of planting, culture, price, &c., &c. There is springing up in this section quite a demand for this tree; and, judging from the statements of reliable gentlemen who have tried them, I have no doubt they afford excellent food for sows and pigs, and for all kinds of poultry. They furnish the first ripe fruit in the spring and continue to yield successive crops of ripe berries until stopped by frost. I have never cultivated it, and therefore, can only speak of the experience of others; but every reliance can be placed on their statements.

As I have written this much, I would like (by your leave) to say a few words about Dr. LEE's article on Plantation fences, &c. The Dr. has given us an excellent article upon the subject, and his advice should be followed even by those having abundance of rail timber. I agree with him heartily about straight fences—cheap, simple, durable, beautiful. I have a plan, however, which I think he will like better than hewed or sawed posts, even out of cedar, locust or chestnut. It is to use the *Mimosa* as living posts in lieu of dead ones. The plank to be let into the trees and nailed, the bark growing over them, will hold them securely when the nails give way. The bottom plank to be 12 inches wide, out of heart timber, and those above it 6 inches, with the spaces between each widening as you ascend. This tree (*Mimosa*) has a great deal to recommend it for the above purpose:

1st. It will grow any where.

2d. It is a very rapid grower.

3d. It will live for centuries.

4th. It propagates from its seeds only—never putting up shoots.

5th. It can be trained to grow as straight as a post.

6th. It can be topped and trimmed so as to cast scarcely any shade.

7th. It is not subject to be blown down by storms.

8th. Stock will not bark it.

9th. One tree furnishes seeds enough in a year to set a plantation.

10th. It adorns and beautifies the farm.

By your leave, further, I wish to say to Dr. LEE that his article on the renovation of worn out fields in the South, is replete with good sense. But, alas! it is not the remedy. To effect this great object he must

1st. Point out to us a manure which shall cost nothing, and which shall be already out on the field.

2d. He must show that this manure will make the field produce more cotton than it ever did, and that for ages to come.

3d. He must show that the cotton gathered from this field will command a higher price than from any other on the plantation.

The hook must be baited with the "almighty dollar" to induce the farmers and planters of the South to take these poor, old fields into consideration. The above is not an impossibility. Who can reveal the secret?

Respectfully, &c.,

B. V. IVERSON.

Columbus, Ga., 1855.

FRENCH LETTUCE—SALAD—MUSHROOMS, &c.

MESSRS. EDITORS—I am raising, successfully, this winter, a beautiful white, small headed Lettuce, which I received from Paris as "*L'azile Gotte lente a monter*," and with which I am so much pleased that I intend to save seed for distribution. The heads are so small that there is

not room to cut them at all when put into the salad dish, but they are so small that they are instead of so much

of the *Cultivator*, and all who may order. Those wishing this can address Capt. Brooks (post paid) and he will furnish young grafted trees, with mode of planting, culture, price, &c., &c. There is springing up in this section quite a demand for this tree; and, judging from the statements of reliable gentlemen who have tried them, I have no doubt they afford excellent food for sows and pigs, and for all kinds of poultry. They furnish the first ripe fruit in the spring and continue to yield successive crops of ripe berries until stopped by frost. I have never cultivated it, and therefore, can only speak of the experience of others; but every reliance can be placed on their statements.

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or winter, if the weather proves mild, an abundance of mushrooms will be produced, which may be eaten without any fear, as only edible ones will grow. I can give you simple directions for cooking them as well as proving them safe, if you wish; but I suppose you know all about it.

Yours respectfully,

R. C.

Beaufort, S. C., 1855.

REMARKS.—Our "better half" prepares salad-dressing nearly in all respects as above directed. It is excellent! Will "R. C." give us his method of cooking mushrooms? We know several ways, but his may be better than any of them.—EDS.

CANADA PROLIFIC CORN.—Mr. J. C. RICHARDS, of Prattville, Ala., has sent us a small package of the above variety of Corn, which he describes as follows:

"It is a handsome white corn and produces from three to eight stalks from each grain, each stalk bearing two to three ears of corn, and the suckers are as prolific as the original stalks; bearing an equal number of ears. This is not the sucker corn that shoots at every joint. This variety is as late as the common Indian corn, and will grow as tall."

Mr. R. will dispose of the seed at the rate of \$1 per hundred grains. He says:

"That is what I gave, and if I had given ten dollars I should not begrudge the money. I am confident that any person who tries it will be perfectly satisfied with it."

Persons desiring seed may address Mr. R., as above. We shall give it a fair trial and report on its merits. Rather too much is claimed for it at the outset, however.

JERUSALEM ARTICHOKE.—Finding that this delicious vegetable when propagated from suckers, as it is and has been in this region, for a great length of time, was troublesome to cultivate, from each plant becoming a thicket of suckers; and that, moreover, flower-heads, the parts used were small, late in appearing and lasting but a short time in season, we determined to try what could be done with seedlings. Small lots of seed were procured from three different sources—one lot from France, another from England, and the third were seeds saved here. They were all sowed at once; but a small portion of each came up about one hundred in all. These were planted in good soil, the fall after; and the following spring bloomed, showing great diversity in period of blooming, size, appearance and flavor. A few, which proved inferior, were removed; and from the rest we have had splendid heads in use three weeks earlier than from the old stock, and continuing three weeks longer in season.

insure cultivators against any hazzard of an overstocked market. There will probably be 600,000 gallons of Catawba wine raised in the Ohio Valley in 1855; but this is nothing to the demand. If it were doubled (which cannot be) every year for five years to come, the market would not be overstocked.

GUANO FOR INSECTS.—A correspondent of the *Horticulturist* says:

"Some time last summer, while budding some young peaches, I found that ants had taken possession of some ten feet in one row. They very earnestly resisted my attempts to inoculate the trees, inflicting many unpleasant wounds on my hands and arms. In order to disperse the warlike little nation, I sprinkled near a pint of fine guano along the little ridges. This threw them into immediate consternation. I noticed little collections of winged ants, huddled close together, and seeming to be quiet, while those without wings ran about in great agitation. The following day not a single insect could be found where the day previous they appeared to be innumerable."

Domestic Economy and Recipes.

CURE FOR BOTS.

MESSRS. EDITORS—Allow me to give you a sure and speedy cure for the Bots:—From 40 to 50 grains of quinine in one pint of brandy, then add one pint of water. My experience in horses has been considerable of late, and I have seen a goodly number taken with the bots. I have also given the above remedy and in no case failed to cure. Respectfully yours, WM. H. DAWSON.
Dardanelle, Ark, Feb., 1855.

GAPES IN CHICKENS.—A subscriber in Harrisonburg, La., gives us the following remedy for this very common disease. We may mention, *en passant*, however; that the Shanghai and other large Asiatic fowls are much less liable to this and other chicken maladies than the common fowls of the country:

"Last spring, my woman, who attends to the chicken department, found several with the gapes. She caught them, and from her Indigo or blueing rag, dropped a drop of Indigo into each one's throat, and they invariably recovered. I believe it to be a remedy for the disease, and have constantly practiced it since with success."

Your obedient servant

To cure the Gapes in Chickens, take a small quantity of Indigo, and drop it into the throat of each bird, and it will be cured.

When the child is being done, prepare warm water, and immerse the feet in it. This gives relief in a short time, when the child should be put quietly to rest, with a jug of warm water to the feet, when perspiration and sleep soon follow.

Any one can follow these directions immediately, and it is a complaint which is soon fatal, unless checked in the early stages, and many precious lives are lost because a physician is not at hand, until too late to save from suffocation.

I have often tried this, and never failed to give relief in one hour, often in half that time.

E. MARKE,
in Country Gent.

THE MAKING OF WINE.—The wine of the grape is an excellent beverage, and is much valued for its healthful and refreshing qualities. It is also a valuable article of commerce, and is consumed in large quantities in all civilized countries. The wine of the grape is made by pressing the grapes, and separating the juice from the skins and seeds. The juice is then fermented, and the wine is bottled for sale. The wine of the grape is a valuable article of commerce, and is consumed in large quantities in all civilized countries. The wine of the grape is made by pressing the grapes, and separating the juice from the skins and seeds. The juice is then fermented, and the wine is bottled for sale. The wine of the grape is a valuable article of commerce, and is consumed in large quantities in all civilized countries. The wine of the grape is made by pressing the grapes, and separating the juice from the skins and seeds. The juice is then fermented, and the wine is bottled for sale.

The *Record* thinks that there must be five millions of acres planted in vines before the price can be reduced to a minimum in the United States! This fact is enough to

STAGGERS IN SHEEP.

Messrs. Editors—I saw a remedy for a disease which has prevailed amongst my sheep, and do not recollect where I saw it. I first thought I saw it in the *Cultivator*, but could not find it in the back numbers. The sheep's head seems to be drawn to one side, and keep going around in a circle. If it attempts to run, it will still turn around and around as it goes. If you or any of your subscribers can give a remedy, please publish it.

Respectfully, &c.

D. E. B.

Clinton, Ga., March, 1855.

Will such of our readers as possess information on this subject, respond through our columns?—Eds.

A CERTAIN CURE FOR SCROFULA.—Nicholas Longworth, the famous millionaire and wine grower of Cincinnati, publishes the following cure for Scrofula:

Put 2 oz of aquafortis on a plate, on which you have two copper cents. Let it remain from 18 to 24 hours. Then add 4 oz. of clear, strong vinegar. Put cents and all in a large mouthed bottle, and keep it corked. Begin by putting 4 drops in a tea spoonful of rain water, and apply it to the sore. Make the application three times a day, with a soft hair pencil, or swab made of rags. If *very painful*, put more water. As the sore heals apply it weaker.

I request editors, in all parts of the Union, and abroad, to copy this, and to republish it quarter yearly; it may save many lives.

N. LONGWORTH.

Cincinnati, Ohio, Nov., 1855.

P. S.—Capt. Harkness, of our city the first person cured by this remedy, applied it without water, and he informed me that he thought it would burn his leg off, but the next day it was cured. His was a small sore, and had been attended to for months by one of the best physicians, without any benefit.

A MIXTURE USED FOR WASHING CLOTHES.—In Berlin, Prussia, the washer-women use a mixture of two ounces of turpentine and a quarter of an ounce of spirits of sal ammoniac, well mixed together. The mixture is put into a bucket of warm water, in which half a pound of soap has been dissolved. Into this mixture the dirty clothes are immersed during the night, and the next day washed.

The most dirty cloth is perfectly freed of all dirt, and after two rinsings in fresh water, the cloth has not the least smell of turpentine. The cloth does not require so much rubbing, and fine linen is much longer preserved by it.

DEAR SIRS.—I was af-

become a blessing
sive article of commerce.

REMARK.—We take the above, *cum grano salis*. It don't, somehow, satisfy us, or "stand to reason."—Eds.

DRY MURRAIN IN CATTLE.—D. D. Bess, of Dugway, New York, communicates the following to the *Northern Farmer*, as specific for that disease:

First drench with 2 lbs. melted fresh butter; now half fill a common junk bottle with coarse salt, then fill it with hot water, not boiling hot, as it may break the bottle, and as soon as it is cool enough, turn down all you can of it, then fill with cold water. Shake and turn down the

remainder—keep the animal confined for two hours, then give it all the water it will drink, and the treatment will seldom need repeating.

Advertisements.

ALBANY AGRICULTURAL WORKS,

ON Hamilton, Liberty and Union streets; Warehouse and Seed Store, removed to No. 52, State street, Albany, N. Y. The proprietors of the above named establishment being the sole owners and manufacturers of EMERY'S PATENT HORSE POWER, &c. All arrangements with their parties for their manufacture having expired, have formed a new copartnership under the firm name of EMERY BROTHERS, and will continue the manufacture and sale of AGRICULTURAL IMPLEMENTS AND MACHINERY, as heretofore at the old stand of EMERY & Co. By this arrangement the united efforts and interests of the Brothers, long known to the public, are secured, and no exertions will be spared to meet the wishes of those dealing in and using the class of implements they manufacture their leading branch being the manufacture of the justly celebrated EMERY'S PATENT CHANGEABLE GEARED RAILROAD HORSE POWERS, with the Machines to be propelled by it, as Threshing Machines, Saw Mills and Machinery generally.

These Powers having been submitted to the most severe tests and trials to determine their relative merits and utility with those of every known manufacture, have, without exception, been awarded the highest prizes for superiority—among which were the following:

N. Y. State Ag'l Society, 1854, 1-53; 1852, 1851, 1850; Ohio State Board of Agriculture, 1854, 1853, 1852, 1851; Michigan State Agricultural Society, 1854, 8-2, 11-51; Indiana State Agricultural Society, 1853, 11-51; Illinois State Agricultural Society, 1853; Pennsylvania State Agricultural Society, 1853; Maryland State Agricultural Society, 1853; Missouri State Agricultural Society, 1853; American Institute, 8-2, 1-5; New York Crystal Palace, 1853; Canadian Provincial Society, 8-2, 1-5; Connecticut State Agricultural Fair, 1854.

WARRANTY, CAPACITY, ECONOMY, &c.—The Two Horse Power and Thresher, is capable with three or four men, of threshing from 17 to 22 bushels of wheat or rye, or the one horse power from 7 to 2 bushels of wheat or rye; or both kinds of powers, &c., are capable of threshing double the amount of oats, barley or buckwheat, per day, of ordinary fair yield. If the crops be extraordinary heavy or light, greater or less results will follow.

These Powers, Threshers, &c., are warranted to be of the best material and workmanship, and to operate as represented by this Circular, to the satisfaction of the purchasers, together with a full right of using them in any territory of the United States, subject to be returned within three months and home transportation and full purchase money refunded if not found acceptable to purchasers.

The public may rest assured the reputation heretofore earned for our manufactures, shall be fully sustained, by using none but the best material and workmanship; and by strict attention to business, they hope to merit and enjoy a continuance of the patronage heretofore so liberally bestowed, which we respectfully solicit.

N. B. All articles bear the name of "EMERY" in raised letters upon the cast iron parts, and however much others may resemble them, none are genuine with this mark.

Full descriptive illustrated price catalogues sent gratis on application.

Albany, N. Y., March 1st, 1855.

EMERY BROTHERS.

Ap 11 3m

MADAGASCAR OR LOP-EARED RABBITS!

THE Subscriber according to promise, made some time since, when he advertised applicants through this paper that he could not possibly supply them with Rabbits, till the orders on hand were filled, could now inform them that he has a few extra pairs of LOP-EARED RABBITS, of a suitable age for immediate breeding. They are in fine health and condition. Price \$1.50 per pair, delivered at the American Express office in Utica.

Morris, Utica, N. Y., Feb. 12, 1855.

FRANCIS ROTCH.

April—31*

FOR SALE!

If you are not
To me liberal. If desired, a
given

Albany, Ga., March 15, 1855.

WM. W. C.

Apr 1-17

OSIER WILLOW.

CUTTINGS of the *Salix Viridula*, the best Osier Willow cultivated will be furnished by the subscriber at \$2 per 100. They can be forwarded during the winter or early spring, to all parts of the Union. Also, OSAGE ORANGE plants at \$2 per 100.

Jan 5-4 *

S. P. HUGH, Albany, N. Y.

FANCY LOP-EARED RABBITS.

A FINE pair of beautiful Lop Eared MADAGASCAR RABBITS may be obtained by addressing the subscriber.

March 24-17

D. REDMOND, Augusta, Ga.

RANDALL'S COTTON PLANTER!

PALMYRA, Lee County, Ga.,
March 12th, 1855.

To Cotton Planters.

WE DESIRE to call your attention to a Machine which we have invented and patented for the PLANTING OF COTTON. Its superiority over all others used for a similar purpose, consists in its great simplicity, requiring no more experience for its use than for an ordinary plow; the cheapness of construction, the great saving of time and labor in the planting of the crop, but more especially in the cultivation of it.

The certificates which we herewith present to you are from some of the most respectable and intelligent planters in our country, who have thoroughly tested our Machines, and sustain us in the above statement of the advantages it possesses. We are confident that when presented to the Cotton Planters throughout the Southern States, it will, in a short time, be universally used by them for planting their crops.

In bringing these Machines before the public, we have taken every precaution to free them from the liabilities of being associated with the mass of patented inventions, which do not stand a practical test, and we can assure all who will try them that they will fully equal our representations.

The Machines may be had of the following manufacturers:—
THOMAS J. CHEELY, Augusta, Ga.; BROWN, CLEMENS & Co., Columbus, Ga.; J. H. WATSON, Lee co. Ga.

WM. W. CHEEVER, Esq., Albany, Ga., is our only Agent, who will contract for us with parties wishing to manufacture the Machines in any part of the United States.

CHARLES RANDALL,
LEONIDAS B. MERCER.

RANDALL & MERCER.

Palmyra, Lee co., Ga., Aug. 10, 1854.

GENTS:—Having planted your entire crops with our Cotton Drill, please give us your candid opinion of the Machines, and particulars as to the advantages to be derived from their use, and oblige,

Yours respectfully,
To Messrs. S. D. McLENDON, WM. H. OWENS, ROBT. LUNDY.

Palmyra, Lee co., Ga., Aug. 12, 1854.

GENTS:—Your favor of August 11th, came duly to hand. In giving you our opinion of your Drills, in the first place we would say, we are pleased in every particular with their operation, and as to the advantages to be derived from their use:—the first is the saving of at least one hundred and fifty bushels of Cotton Seed, in planting each hundred acres; second, a saving of labor in planting, of one horse and hand, planting from eight to nine acres per day, the Machine opening the furrow, dropping the seed and covering as it moves over the ground; third, a more perfect stand may be obtained with your Drill than by planting in the common way; fourth, a saving of at least one-third in the labor of chopping out; fifth, the seed being put in a line not one-half an inch in width, the chopping out can be deferred, until the season for rice is passed, without injury to the growth of the Cotton; and being in this narrow line with a sweep or narrow rooter, you can side so close as to cover up the first crop of grass in the Drill without injuring the stand of Cotton in the least. By this close siding nearly all hoe work may be dispensed with, after chopping out. These we consider the principal advantages to be derived from the use of your Drills. On a retrospect of our last year's experience we have no hesitation in saying that any person with your Drills, can cultivate at least twenty five per cent more Cotton to each hand, with the same labor than can be cultivated in the common way of planting. We put that at a low figure so that no one can say they have been deceived by us. In the hope that these Machines may come into general use, we subscribe ourselves,

Yours very truly,
S. D. McLENDON,
WM. H. OWENS,
ROBT. LUNDY.

Albany, Dougherty co., Geo. Aug. 16th, 1854.

GENTS:—Yours of August 14th, with enclosed is before us. In reply we would state that we believe any person using your Cotton Seed Drill will realise every advantage Messrs. McLENDON, LUNDY speak of; and we fully coincide with their prediction of your invention.

Lee co., Aug. 10, 1854.

WM. W. CHEEVER:—In reply to yours of the 5th inst. in regard to the operation of your Cotton Seed Drill, I am happy to say that after planting a portion of my crop in the old way, I was enabled to obtain one of your Drills, with which I finished. It is what we have long wanted, and the beautiful work it performs has perhaps been attempted in a thousand different ways by intelligent planters, but with only partial success; yours leaves nothing to be desired; it deposits the seed uniformly, and constantly on a line of one to two seeds in width; saves about one-half of the labor in planting; and one-third of the hoe labor in cultivating. All must use this drill in self defence; I shall, for one.

More cotton may be planted and cultivated, and if not the labor saved, may be turned into other channels. Yours respectfully,
April—11

J. L. MERCER.

SUPERIOR THOROUGH-BRED DEVON CATTLE, AND ESSEX PIGS, FOR SALE!

THE Subscriber having this day purchased from Dr. W. P. Wainwright, his interest in the herd of D. V. N. CATTLE, hitherto owned conjointly by them, will continue to give his strict attention to the breeding and raising of this increasingly popular breed. Having now a herd of over twenty head, bred entirely from animals of his own importation, he is enabled to offer for sale a few young bulls and heifers of very superior quality.

Also constantly on hand thorough bred ESSEX PIGS, descended from the best imported stock. For full particulars as to age, price, pedigree, &c., address
April—8c
Rhinebeck, Dutchess county, N. Y.

FOR SALE!

A SEA Island Cotton Plantation, containing 900 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skidaway Island, in Chatham county, on a bold salt water river, the health of which is unquestionable, and the fertility for manuring with marsh and mud is unsurpassable. The land lying three sides on the river. The place is situated 1 mile from Savannah. The lands of Skidaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters and for stock raising. Price \$3,500. Terms accommodating. Apply to
S. F. DUPON, Savannah.
1st of Hope March 9, 1855. Ap 11—f

DEAN COTTON!

THIS new variety of Cotton in this section, not only makes a very fair yield, but is very superior in point of staple, as is testified by a written report of General Williamson, Judge Harris, and others. Planters who raise large crops of Cotton could do well to plan a large portion of their crop with this Cotton, as it will wait much longer on the picker, without falling out; it ticks easy, and the bolls are very large. It is peculiarly adapted to thirly land, as the roots sink deep into the earth. It should be planted one-fourth wider in the rows than other cotton. Price of seed per peck, \$1.50; price of seed per bushel, \$5.

TESTIMONY IN ITS FAVOR.

The Houston Telegraph, (Texas) speaking of this new variety of cotton, says: "All who have cultivated the Dean Cotton, so far as we are apprised, are delighted with their success, and are determined to extend its cultivation. The quality of this cotton so far from deteriorating, has steadily improved, and the demand for it in the market steadily increased."

Extract from a letter from Messrs Dean & Cramer, Commission Merchants at Galveston, Texas:

Galveston, Texas, March 19, 1853.

Mr. D. DICKSON—Dear Sir:—There has been about five hundred bales Dean Cotton sold in Galveston this season. It usually sells from 35 to 40 per cent more than the common kinds of similar classification. A lot of one hundred bales shipped to Boston sold for 15 cents. We could readily sell the first part of Mr. Geo. Dean's crop for 15 cents, but sold it for a better price.
DEAN & CRAMER

Covington, La., Oct. 3, 1853.

We have examined the growth of the Dean Cotton, introduced in this section by D. Dickson, of Covington. Its yield is about equal to our common Cotton the bolls are very large, and the staple superior to any Upland Cotton we ever saw.

EDW. T. THOMAS,
M. L. KENNON,

JNO. N. WILLIAMSON,
JOHN HARRIS.

Covington, Ga. Oct. 5, 1853.

I planted, on the 14th day of May last, of the Dean Cotton, on red thirly land; the stalks are large, and the bolls are numerous and large, and the best Upland staple I ever saw, being more than an inch longer.

HORACE J. BATES.

[From the Southern Recorder of the 26th Decmbr 1854]
A lot of five hundred bales Dean Cotton sold at auction in New Orleans was sold in New Orleans for 15 cents per bale.

K. M. HOOKE,
Chattanooga.

MCCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market.
Feb 55—C y

IMPORTED GARDEN SEED, &c.

THE Subscriber has on hand, a large and full assortment of the best English GARDEN SEED of every variety. Also, White and Red CLOVER; Lucerne, Herds, Blue and Timothy GRASS SEED; White and Red ONION SETTS; OSAGE ORANGE; OREGON PEAS; FARMER'S PLASTER; GUANO, &c., &c. For sale, either at wholesale or retail, by
WM. HAINES, Augusta, Ga.

N. B.—Orders from the country will receive prompt attention.
Jan 55—3c

SOUTHERN CULTIVATOR.



N. ORR. SC. N.Y.

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

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WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

DR. LEE'S INTRODUCTORY LECTURE.

UNIVERSITY OF GEORGIA, March 22, 1855.

DEAR SIR—At a meeting of the citizens and members of the Senior Class, who are attending your very interesting Lectures, the undersigned were, this day, appointed to solicit a copy of your Introductory Lecture, for publication in the Agricultural journals of the State, that the general scope and design of the course may, in that way, be made known to the public.

Your compliance with this request will oblige not only the meeting we represent, but we doubt not the reading public. With sentiments of great respect, we are

Your obedient servants,

WM. L. MITCHELL,
W. D. WASH,
D. SCOTT,
J. A. STANLEY, } Committee.

DR. DANIEL LEE,

Terrell Professor of Agriculture, Athens, Ga.

ATHENS, GA., March 24, 1855.

GENTLEMEN—I have your note of the 22d inst., requesting, in behalf of the citizens, and members of the Senior Class in the University of Georgia, who are attending my Lectures, a copy of my Introductory Lecture for publication in the Agricultural papers. It is herewith furnished for that purpose.

I am, with great respect, your obedient servant,

DANIEL LEE.

To Messrs.:

W. L. MITCHELL, Esq.,
W. D. WASH,
D. SCOTT,
J. A. STANLEY, } Committee, &c.

GENTLEMEN—The distinguished founder of the Terrell Professorship of Agriculture in the University of Georgia has designated the following subjects upon which lectures are to be given:

- 1st. Agriculture as a Science.
- 2d. The Practice and Improvement of different People.
- 3d. Chemistry and Geology, so far as they may be useful in Agriculture.
- 4th. Manures.
- 5th. Analysis of Soils.
- 6th. Domestic Economy, particularly referring to the Southern States.

No educational institution can devote a share of its attention to studies of a more practical character than those which have been named. It is my agreeable duty to investigate, elucidate, and commend to your favorable regards, so far as I shall be able, the most important interest of all civilized communities; an interest that deeply affects the daily bread, the necessary clothing, the greatest comforts and the sweetest luxuries of the human family.

"Agriculture as a Science" embraces equally the Mineral, Vegetable, and Animal kingdoms, in its most common and legitimate researches. Neither the labor, nor the life time of any one man is adequate to master all the sciences and all the arts which constitute the learned profession of Tillage and Husbandry. In the best agricultural schools of Europe, the labor of teaching rural sciences is divided between from twelve to fifteen professors. This fact indicates the wide range of collateral studies there held to be necessary to the right understanding and wise practice of agriculture. In this country, six or seven professors are employed in a medical school to teach the Healing Art, whose subjects to be investigated are not so numerous as those that appropriately belong to the several departments of rural literature and science.

These preliminary remarks are made that you may not expect too much from a single Chair of Agriculture, and be prepared to make due allowance for the want of suitable text books, of a museum for illustrating the matters under consideration, and for many other impediments to be encountered, and gradually overcome, in a new enterprise of this kind. Time is an indispensable element in the growth and maturity of every natural science, and for its most successful application to the industrial arts. Nature is infinite in variety and in results; and whoever devotes his life to the labor of collecting and collating agricultural facts will find reason to be cautious and slow in their generalization, if he would avoid error, and attain any useful ends. Small progress made with care and certainty is better than long strides in the dark, which commonly lead to disaster, if not disgrace. No one should despise humble beginnings in agricultural literature and science; but remember that the towering oak which has braved the storms of centuries, had its origin in the living germ, in a few microscopic cells, of a little acorn. Rural sciences have this advantage even in infancy; they are strong in vitality. They can no more die and be forgotten than the achievements of the last fifty years can be expunged from human records and remembrance.

As rural affairs embrace many arts as well as many sciences, it is desirable to have a clear perception of the difference between these two departments of the profession. Allow me to ask the question: What is the essential difference between an art and a science?

Substantially it is this: An *art* is always something to be *done*; a *science* is always something to be *known*. Mankind, by ever doing what ought to be done, and ever learning what ought to be known, gradually, but certainly reduce the one set of employments to arts, and the other to sciences. The proper direction of our physical and intellectual activity, and the wise culture of our moral and social endowments, are cardinal points to direct both the "practice and the improvement of the people"—one of the themes upon which I am expected to lecture.

Agriculture has been practiced as an art since the time when CAIN was a tiller of the ground, and ABEL followed sheep-husbandry for a livelihood. It is a curious fact in the early history of the human family that the first born sons of ADAM should have divided their occupation into Tillage and Husbandry. The cultivation of cereals, or bread-plants, is entirely distinct from the care of sheep, horses, neat cattle, swine and poultry; although sound economy demands that stock-husbandry and field culture be united on the same farm, or plantation. There are some exceptions to this general rule, but they do not impair its value as a settled principle of agriculture. The animal and vegetable kingdoms sustain, in the perfect economy of Nature, peculiar and important relations to each other; and the mutual dependence of agricultural plants and domesticated animals is demonstrated in the clearest manner under the wise practice of what English and German authors call a "Mixed system of Tillage and Husbandry." If we push tillage too far, and neglect stock-husbandry, we destroy the balance of organic nature, by depriving our growing crops of manure, and our soil of the elements of fertility. Such practice violates a law of nature; and if we do not desist from it, sooner or later, she will smite our abused fields with barrenness. As the laws of nature are in truth the laws of God, we are able to trace the principles of scientific tillage and husbandry back to the unalterable economy of the Creator of both the earth and the living beings that inhabit it. A moment's reflection will satisfy you that every product of farm industry is in part, or wholly, the offspring of vegetable, or animal life. Life is a productive power of inestimable value; and however much one may neglect other branches of knowledge, he should not fail to study Agricultural Physiology. The planter, the husbandman, the gardener and the orchardist, alike have to do with the active agency of vegetable and animal vitality. In myriads of insects, it appears as an enemy: and in the growth of pestiferous weeds, it is hardly less injurious to the cultivator of the soil. How he can best control and use this vital power, whether in plants or animals, will be elaborately discussed in the course of lectures of which the present is introductory, and a brief outline.

Chemistry has done more for every department of rural industry than any other science. Indeed, all the industrial arts are largely indebted to chemical researches and philosophy for their present advanced condition. It has developed many of the most useful principles in almost every calling and profession known to civilized man. The accuracy and delicacy with which it weighs and measures all ponderable bodies, are truly surprising. It was not until CHAPMAN and DAVY had brought the light of Chemistry to bear on agricultural affairs that farmers were able to understand the exact relations that rocks hold to soils, and soils to plants, and plants to animals, and both animals and plants to their parent soils and parent rocks. Between the Primary rocks which appear to form the skeleton of the planet and man, the last crowning work of Creative energy, there intervenes an indefinite number of Secondary, Tertiary, and more recent strata, in which are embedded the remains of an extinct *Fauna* and *Flora*, and minerals of equal interest and value in scientific agriculture. Geologists and Naturalists have co-operated with

Chemists in tracing the natural history of the Earth's crust and inhabitants from an early geological age to the present time. These sciences are important in an agricultural point of view, because they explain both the origin and the general character of all soils, whatever their quality. It is hardly too much to say that chemistry and geology form the basis of agriculture as a science; although meteorology, physical geography, mathematics, botany, comparative anatomy, entomology, and many other sciences lend assistance to the educated planter. Sciences, like Arts, and like the members of a cultivated and wise community, greatly aid each other; and while other learned professions, and particularly those of divinity, law and medicine, have done much to create a popular taste for agricultural literature and refinement, in turn, the profession of agriculture by fixing a higher standard of general intelligence, elevates and purifies every other calling. We are all alike amenable to public opinion; and if this be low in its moral tone and feeling, rude in its social, and uncultivated in its mental faculties, the professions of Medicine, Law and Divinity, and the Press, must come down correspondingly to a lower level. By striving to raise up agriculture, and other industrial pursuits to a more honored and improved condition, we detract from the dignity and usefulness of no mere professional calling; but we give each a higher basis, and a sounder foundation on which to build a more enduring and lofty structure.

Art, literature and science are integral parts one system and so run into each other in their natural growth, and reciprocally impart both strength and beauty, that neither can be assailed without jeopardizing the safety of the others. What is true of art, literature, and science in general, is emphatically true of the literature, and the several arts and sciences which make agriculture and those that practice it, precisely what they are. The masses who follow tillage and husbandry do not cherish that cordial friendship for the infant literature and youthful science of their occupation which their own best interests demand. They are apt to regard the ideas of science and literature, in connection with plowing, planting, hoeing, harvesting, fencing and stock husbandry, as incongruous and out of place. To many, the words are new, and appear far fetched, high-sounding and something like a guided humbug, designed to cheat honest, old fashioned industry out of his mother wit, or perhaps, his money. A world of prejudice has to be met and overcome; and some years must elapse before agricultural knowledge, as recorded and taught in books by the most successful farmers in all civilized nations, will be estimated at its true value. Although the history of agriculture has been little studied, and cultivated but by a very few, yet it is a magnificent field, and one that presents almost a virgin soil covered with rich fruits ready for the harvest.

No intelligent gentleman is ignorant of the fact that our countrymen have long been in the practice of sending to England and paying extravagantly high prices for blooded stock of all kinds. About four years since one of the most distinguished improvers of Short Horn cattle in the kingdom (THOMAS BATES, Esq.) died, and his entire herd was sold at public auction. Such was the world-wide reputation of the neat stock of Mr. BATES, and his fame, as a breeder, that his executors advertised the sale of his famous Short Horns in the United States, France, Belgium, Prussia, Austria and other countries, as well as in Great Britain. About five thousand men, and mostly breeders, attended the sale; and almost every nation in which rural knowledge is cultivated at all had its representatives there to bid for the prizes. I need not say that this herd sold at fabulous prices, taking not recent, but previous sales, for comparison.

In studying the probable causes of this gentleman's

success, (for he won more premiums than any other man in England of his time) I was forcibly impressed with the fact that he was educated for the practice of law, not husbandry, or tillage. The point which I urge for consideration is this: The most intelligent husbandmen in all nations pay willing tribute to the skill in their profession of a man, who was, fortunately, exempt from all agricultural traditions, and looked to modern science alone for direction. He drained, many years ago, nearly 800 acres of wet land and had several hundred in tillage, not to name his extensive meadows and pastures for keeping stock. Making a signal failure in early life with the too free use of swamp muck as a manure, he went to Edinburgh expressly to study Chemistry before agricultural Chemistry had a name; and subsequently, by mixing marl and burnt lime with the rich vegetable matter in swamps, he not only corrected the acid salts of iron which had poisoned his crops for years, but obtained both gyp sum and bone earth, in a way I shall hereafter fully explain. Many problems in chemistry and agriculture now appear easy and simple, which forty years ago were unsolved by the wisest of living men.

Perhaps no man ever did more to develop the true practice of tillage than JETHRO TULL, the inventor of drill-husbandry. He lived a century and a half ago and was educated a lawyer, not a farmer. Whoever consults the literature of agriculture as it exists in the English, French, German, Latin and Italian languages, will find that other professions, sometimes the military, as in the best days of Rome, with its masterly civil engineers; sometimes the clergy, ever distinguished for their learning and love of rural pursuits, and at others, educated physicians, judges, lawyers, naturalists, poets, historians, editors, chemists and geologists, have in turn, or jointly, contributed most to the advancement of agricultural knowledge. More recently, men trained to thorough business habits as merchants, manufacturers, and mechanics, carrying their energy and methodical actions into agriculture, with no traditional errors to warp their better judgement, have done much to infuse new life, more system, and greater economy of labor into all farming operations. Agricultural progress is largely indebted to inventors of improved implements and machines—to such men as WHITNEY, FULTON, MCCORMICK, ARKWRIGHT, and others, who have augmented the mechanical power of human muscles a thousand fold. So numerous and extensive are agricultural machines, and so many keen intellects are constantly engaged in making new inventions, and improvements on old ones, that it requires no inconsiderable study to keep pace with the machinery, implement, and tool department of our profession. Having had charge of the Agricultural Department of the Patent Office four years, my opportunities of knowing something of the progress of inventions in this line have been ample.

Manures have for ages been so unwisely managed that their loss in contaminating the atmosphere, and offending the nostrils of persons, has brought them into bad odor for popular discussion. Regarded as the natural food of plants and as a part of the wise economy of Providence, there is nothing offensive in their nature, when rightly used, or properly considered. More may be done for Southern agriculture in this department than in any other; for it is now generally and sadly neglected. It opens up a wide field for experiment and research. When one raises ten barrels or fifty bushels of corn upon an acre, how much of the substance of the soil is necessarily consumed in the growth of such a crop? If the soil loses nothing of its elements of corn plants in their growth then manure would seldom, if ever, be required. All experience goes to prove that tillage and the production of crops, taken from the land, impair its fruitfulness; and that the application of manure renovates the land again.

Farmers are altogether indebted to chemists for what they know of the constituent elements of manure, and of the relative value of each constituent. The first useful fact brought to light by chemical analysis, is the large percentage of simple water in all stable and common yard manure. From 75 to 85 per cent. of stable manure is nothing but water, as it is usually hauled into fields, so that a farmer who applies five loads of nominal manure to his land, really gives it four loads of simple water and one of solids. If these solids be examined chemically, nearly one half their weight turns out to be nothing but the elements of water, or pure oxygen and hydrogen in an organized condition. Of the other half of the load of solid manure, about four fifths are simple carbon, or the substance that appears as coal when wood, straw, or grain is slowly charred with the atmosphere mostly excluded in the process.

While water, the elements of water, and carbon are large and indispensable constituents in the growth of all plants, abundant experiments prove them not to have a high market value as manure. If a farmer had to purchase water and carbon to make his crops, they would cost him at least five times more than they now do; and one reason why so few acres cultivated in cotton, corn and other small grains, are artificially fertilized, is the *weakness* of the fertilizing power of a ton of home made manure. It is sold at the livery stables in Athens at fifty cents a load; and I doubt whether it would pay a better profit to give sixty dollars for 120 tons of this domestic article to be hauled three miles and over, (the distance of my land from this place) than to pay sixty dollars for a single ton of the best Peruvian guano. Why a ton of one kind of manure is worth from fifty to one hundred times more than a like weight of another kind is an important agricultural problem which will be fully and satisfactorily explained hereafter.

It is well to consider a plantation in the character of a factory, where certain raw materials are consumed in the production of staples of great domestic and commercial value. No planter, nor other person, has the power to create a single atom of matter for any purpose whatever. In studying the growth of plants and animals, it is important to keep this fact constantly in mind; for every particle of matter that forms the whole weight and substance of every living being, whether animal or vegetable, has an existence before its organization. Something is never made or grown from nothing; and to secure the wonderful uniformity in different races and families of plants and animals, without impairing their infinite diversity, it is obvious that all these organized beings are governed by immutable laws. Their systems can neither add to, nor diminish the elements out of which their bodies are formed; nor can they transform one elementary substance, like carbon or oxygen, into another, like nitrogen, or phosphorus. Hence the presence of any one, two, or three of the necessary ingredients to form the most luxuriant crops avails nothing so long as the other equally indispensable elements are absent from the soil. Although the analysis of soils as hitherto generally practiced, has not disclosed so much knowledge that could be turned to an immediate practical account, as some sanguine persons have expected, yet the subject is by no means exhausted. To be of great practical advantage, analyses should be as prolonged from month to month, as plants are in growing, and as nature is in feeding them. She takes centuries to separate from their mineral compounds, the potash, soda, magnesia and lime found in the ashes of forest trees. These ashes never all existed, in an available condition, at any one time in the soil. They were gradually separated from their before insoluble silicates and rendered available as needed from year to year, to perpetuate the annual growth of the giants of the vegetable kingdom. Soils should be investigated with equal patience and minuteness.

if we would learn their utmost latent resources for the support of plants and animals. Instead of operating on one or two hundred grains, their agricultural value may be much better ascertained by extending our researches to several pounds, especially if we would learn the amount of available elements of fertility in any given quantity of earth. A hill of corn planted in rows four feet apart one way, and five the other, has twenty cubic feet of earth, and more than a ton in weight, from which to extract its earthy constituents. These constituents may not exceed a dram in weight, and the plant or plants be four or five months in the hottest part of the year in taking them from the ground. Let the chemist, with his analytical art, take an equal mass of earth and equal time for the operation of atmospheric and solar influences, and for washing and leaching the soil with rain-water as it drops from the clouds, and he too may find every substance in the soil extracted by the plant from the first sprouting of the germ to the full maturity of the crop.

The value of soil-analyses has been the subject of much discussion. Had the disputants devoted their time to the advancement of chemical manipulations in these researches they would have been better employed. Men who find most fault with Science for its alleged short-comings, are innocent of any effort to increase its usefulness. A scientific truth may be exceedingly valuable to one farmer, and worthless to a dozen others, from their inability to appreciate its bearings on the results which they labor to attain. Many facts and truths lie dormant and unproductive for years, when some lucky accident, or per chance small discovery, renders them of universal significance and value. Some of the facts established by soil analyses are of this character; being links in an unfinished chain whose strength should not be prejudged before the work is completed. Very few scientific men in this country are cultivating agricultural chemistry, and no reasonable man will expect it to make rapid progress. It has had more of the frowns than the smiles of Public Opinion; and some of its friends have grown gray while waiting for popular appreciation of this branch of human knowledge.

Domestic Economy is named by the munificent founder of this new Professorship as worthy of our deliberate study; and all thoughtful persons will see the propriety of cultivating and improving this pleasant home feature in rural life. It is possible for one's home not to be so pleasant as it ought to be; and in nine cases out of ten where such is the fact, some defect in domestic economy will lie at the bottom of the difficulty. There are a thousand ways in which bad household economy leads to bad plantation management, inducing pecuniary embarrassments, and not a little untold unhappiness.

Domestic economy is not penuriousness, nor the abridgment of any comfort for the purpose of accumulating property. On the contrary, it has for its object an increase of domestic enjoyment by a more judicious use of whatever means one may appropriate for the support of himself and family. It is an old and common remark, "that one half of mankind know not how the other half live;" and it must be confessed that the art and science of living well have received less public discussion, and been more neglected than many other subjects of almost infinitely less importance. Wise economy in the use of fuel for warming dwellings; making them really comfortable at the minimum expense, is alone worthy of more than one public lecture. Many families contrive to burn a great deal of wood without making their rooms comfortable owing to defects in doors, windows, floors, ceilings and chimneys, which let out all heated air, and let in all that is colder from without with the utmost freedom of motion. The cost of cutting and hauling firewood is not diminished by those that suffer most from cold in such poor apologies for houses. They appear to be constructed

with a view to compel a prodigious waste of fuel and to receive the least possible benefit from its combustion.

Fire-places and chimneys in common use are rarely made on any sound principles of economy, either for health, comfort, or the pocket. Let a housekeeper make as large openings though the sides of his dwelling as those out of all his fire-places, through his chimneys, and keep them open in the cold of winter as well as in the heat of summer, and the folly of such an act will be apparent to all. But custom renders common observers thoughtless of evils and discomforts of no inconsiderable magnitude, which, if not familiar and long endured, would appear perfectly intolerable. Careful experiments in the construction of fire-places and chimneys have led to great improvements, by which both economy of fuel and an agreeable warmth are obtained. All the scientific principles and mechanical arrangements involved in this economical problem will be hereafter elucidated.

Every family needs pure water for purposes of drinking, cooking, ablution, washing cloths, and other indispensable uses; and it is an economical question of great moment, in the course of a life time, how a full supply of soft wholesome water can be best obtained at a family residence. In this place, something over a ton of water falls in rain on every square yard in the course of a year. At this estimate, an area of twenty yards square would yield four hundred tons in twelve months. To filter and preserve pure, so much of this water as one may need for every day consumption, are points in domestic economy worthy of our best consideration.

No one who has not made it the subject of special inquiry would credit the statement showing the losses and vexations that arise from bad economy in the management of water.

The putting up, curing and keeping of all kinds of meat is an art susceptible of much improvement. It is not less a chemical than an economical question, and should be studied as a branch of organic chemistry. Intimately associated with the keeping of meat is the question of making sweet, delicious butter, and of preserving it free from rancidity, and other defects, the year round. All sensible persons will admit the general lack of knowledge and care in this branch of domestic economy. Indeed, the more closely we examine *common things* in domestic affairs, the more glaring do their errors appear. Our educational system overlooks those branches of knowledge which have a direct bearing on our comfort and happiness every day of our lives, while it cultivates ornamental literature and ornamental arts designed for show rather than use. I would not condemn anything truly ornamental, whether in art or literature, but urge the study of domestic economy as a science. It deeply concerns all that we eat, all that we drink, our sleep at night, our clothing by day, and our health and comfort at all times, from the cradle to the end of our existence in this world. Man is by nature a social being; and the wise cultivation of his social faculties and domestic habits, gradually transforms the wild brutal savage, whose hand, like that of CAIN, is stained with the blood of his murdered brother, into a civilized, humanized, member of the most advanced community. Human elevation from primeval darkness, ignorance, crime and suffering, so far as it depends on the efforts of man himself, may be reduced to fixed principles, and a legitimate science. Educational efforts in this direction neither reject, nor claim to supersede the advantages of Christianity. On the contrary, those who have done most to improve society by the increase and diffusion of useful knowledge through the medium of books and periodicals, and by founding institutions of learning and science, have both recognized and felt the ennobling influence of the divine teachings of the Bible. The day has happily gone by when a conflict between Science and the

Bible was seriously apprehended by many educated men who took a hasty and superficial view of what appeared contradictory, or incompatible. It is not my purpose to discuss this feature of science; while I have thought it not amiss at the commencement of my first course of lectures to indicate in the fewest words possible my profound regard for the christian religion. In teaching geology in connection with agriculture, I have occasionally met with pious men who feared that the acknowledged truths of this science in reference to the age of our planet, and of the many extinct genera of living beings which have inhabited it, might weaken the popular belief in the account of the creation as given in the first chapters of Genesis. I need hardly say that it is the Interpretation, not the Text, that fails to harmonize with geology.

Horticulture, Fruit-culture, and Landscape Gardening are branches of rural affairs upon which something should be said in a comprehensive survey of our profession.—Each is worthy of a separate professorship; and horticulture is sometimes divided and subdivided until the florist who cultivates roses is not expected to have any professional knowledge of dahlias, japonicas, or other flowering plants. All I can hope to do is to state clearly and correctly the principles which ought to govern operations of this character, and name the best authors who have written on these subjects. As practical reformers, gardeners and fruit growers have rendered mankind an invaluable service by showing how much excellent food may be raised on a single acre of ground. This has encouraged farmers to till less land, and manure and cultivate it much better than they formerly did. As population increases, and a community attains to the age of centuries, forest-culture and landscape gardening become not less useful than fashionable. In a country where the natural forests are attacked and destroyed with perfect recklessness, the planting and culture of trees for timber, as well as for shade, ornaments and their fruits, will sooner force themselves upon public attention. Where land is so abundant and cheap as it is in this great State, forest-culture and the formation of beautiful parks, lawns, and lovely groves, ought to be encouraged by general applause and the premiums of all agricultural societies.

Georgia has every natural advantage, wealth and population enough, to be made into something like a paradise to live in. Its agricultural and horticultural resources have never been investigated with that degree of care, caution and patience which equally avoids exaggeration on the one hand, and a hasty underestimate on the other. Facts are sober realities; and they should be soberly considered by all who would understand their true meaning.

It is desirable to collect specimens of different soils, marls, greensand, rocks and other minerals, from different parts of the State, and the South, for analysis, and to form a Museum in connection with the Terrell Professorship in the University; and I respectfully solicit the assistance of all who may attend these Lectures in procuring fair samples of earths, fertilizers, agricultural plants, fruits and seeds for the use of this new Department. Until a suitable Text Book (on which I have spent some years) can be corrected for the press and printed, we shall have to use Prof. JOHNSTON'S Lectures on Agricultural Chemistry and Geology as the least objectionable of any in the English language. BOUSSINGAULT'S Rural Economy, NORTON'S Elements of Scientific Agriculture, and HITCHCOCK'S Geology, are works of an elementary character, which may be studied with profit. The College Library, I am pleased to know, contains many of the latest and most reliable authorities in the natural sciences, such as LYELL'S Principles of Geology, OWEN'S Comparative Anatomy, MULDER'S Chemistry of Vegetable and Animal Physiology, ROSE'S Chemical Manipulations, and others, to whose

teachings I shall often have occasion to refer. By making a wise and successful use of the means of improvement which we already possess, we may reasonably hope that the Legislature, or some noble friend of agriculture, will give to the University of Georgia funds sufficient to purchase stock and equip a farm for experimental purposes, that Practice and Science may together develop and demonstrate the best system of Rural Economy for the Planting States.

THE PRODUCTION OF CHEESE.

HAVING been reared on a dairy farm, the remembrance of sweet, delicious curds, and the practice of the art and mysteries of cheese-making, render the themes pleasant to the writer, if not inviting to the reader. All the nobler animals which God has created on this planet belong to the grand *Mammalia* family; and the words *mamma*, and *mammalia* suggest the peculiar importance of Milk in the economy of nature. Science teaches us that cheese in milk is liquified flesh; and as such, it is an exceedingly valuable product, and one that deserves far more attention than it receives from those who ought to study and understand every principle of domestic economy. Casein, curd, or cheese, is soluble in water, and in milk, which is seven-eighths water, by the aid of soda, or some other alkali. So soon as lactic acid is formed in recently drawn milk, it neutralizes the soda that renders cheese soluble; and thus the fluid is changed into *curds* and *whey*. When a child, calf or pig takes new milk into its stomach, the gastric juice, which has an acid reaction, and in which muriatic acid is often detected, soon coagulates the dissolved curd preparatory for its digestion. Observing this phenomenon in the stomachs of all animals, the keepers of milch kine, and other domesticated animals giving milk, were early led to use the stomachs of young calves and pigs to separate the curds known to exist in this copious secretion from its watery part. The Mosaic Law, however, regards rennet as meat; and the Jews were forbidden to mingle meat with their milk. As all vegetable acids will neutralize soda; the Hebrews were able to make cheese without rennets of any kind. They used a plant called "ladies bedstraw" (*Galium verum*) for the purpose indicated. "Butter-wort", (*Pinguicula vulgaris*) also yields an acid juice, much used in some countries for cheese-making. In Holland milk is now generally coagulated by muriatic acid in preference to the use of rennet, which is there well understood; because the acid imparts a sharp and agreeable taste to the cheese, which is not attainable by any other known means. The variety of tastes, and of cheeses is almost infinite; and a volume might be written on the subject without exhausting it.

To produce cheese of the very best quality, one needs, 1st, the right kind of soil and climate; 2nd, the right sort of grass and other food for cows, from which alone the best milk is elaborated; 3rd, good *rennets* which are made only by those who are familiar with their preparation; 4th, skill in all the manipulations of keeping, warming, and coagulating milk, cutting and breaking up the curd, dipping off the whey, pressing, turning, and oiling the cheese, and of keeping the cheese-room sweet, clean, and free from blowing flies, as well as all utensils perfectly exempt from impurities, which will not fail to injure both the reputation and the cheese of the dairy-maid.

In his "Rural Economy of Norfolk" (where excellent cheese is manufactured) MARSHAL says that rennets are prepared as follows: "Take a calf's bag, maw, or stomach; and having taken out the curd contained therein, wash it clean, and salt it thoroughly inside and out, leaving a white coat of salt over every part of it. Put it into an earthen jar, or other vessel, and let it stand three or four days; in which time it will have formed the salt and its own natural juice into a pickle. Take it out of the

jar and hang it up for two or three days to let the pickle drain from it. Re-salt it, and place it again in the jar, cover it tight down with a paper pierced with a large pin, and in this state let it remain till wanted for use. In this state it ought to be kept twelve months; it may, however, in case of necessity be used in a few days after it has received salting; but it will not be so strong as if kept a longer time. In order to prepare this rennet for use, take a handful of the leaves of the sweet briar, the same quantity of the leaves of the dog-rose, and the like quantity of bramble leaves; boil them in a gallon of water, with three or four handfuls of salt, about a quarter of an hour; strain off the liquor, and having let it stand till perfectly cool, put it into an earthen vessel, and add to it the maw (rennet) prepared as above. To this is added a good sound lemon, stuck round with about a quarter of an ounce of cloves, which gives the rennet an agreeable flavor."

The decoction of the leaves of sweet briar, dog-rose, and bramble may be dispensed with; but the use of the lemon and cloves is commended. The strength of the gastric juice thus provided for coagulating milk, will depend partly on the age of the rennet, and partly on the temperature or climate where it is kept.

Experience in its use can alone decide the exact amount which will yield the most satisfactory results. In the best dairy districts of England, about a third of a wine pint of the liquid above describes suffices for fifty gallons of milk. In small dairies in this country it is a common error to put in too much rennet, which always renders the cheese strong and unpleasant. The least that will answer fully to coagulate the milk, is the quantity needed. Cold, sweet milk coagulates with considerable difficulty; and the warming of the whole mass—none too much, and none too little—is a point of importance in cheese making. Something near blood heat, or the temperature of the stomach of a sucking child, in which new milk coagulates so readily, is the right degree for the adding of liquid rennet. Formerly it was not uncommon to heat a part of the milk in a large iron pot or kettle nearly to the boiling point, and mix this with cooler milk in the cheese tub; but in this way one is almost certain to scorch a little milk on the sides of the iron vessel, which is sure to damage the cheese. To avoid this, milk was first warmed in large tin buckets let down into boiling water—the milk being stirred constantly to warm it all equally. In the large cheese making establishments in the State of New York, milk is warmed in vats either by steam or hot water conveyed through pipes in the bottom of the vat. Professor JOHNSTON says that 95° Fhar. is the right temperature for setting milk; but some dairymen prefer 85, or at most 90° of heat. When milk is raised to a high temperature, it bursts the small, microscopic vessicles which surround the particles of butter, and the latter run together like oil, and flow out of the curd when it is pressed, with the whey. Many cheese makers who are too wise in their own conceit to study the elementary principles of their business, contrive, by dint of hard scalding and hard pressing, to extract nearly all the butter from the cheese which they manufacture, and feed it to their hogs or calves in whey. It would be quite as well for the consumers of such cheese, if they made them exclusively of skim-milk, and sold their butter as such in the market.

After milk is set, the time during which the curd stands is important. It should be cut and broken up as soon as the milk is fully coagulated. The longer the curd stands after this, the harder and tougher it will become. Most dairymen in New York follow the Cheshire and Ayrshire practice of cutting curd with a knife; but it should be used gently, and the curd ought to be slowly pressed, whether by the hand or other means, until it is dry enough to be chopped fine. In making the rich Stilton cheese, the curd is not cut nor broken at all; it is hung

up in a cloth for the whey to drain out. The leading object being to retain all the butter in the curd. Cheese intended for a distant market should be pretty well pressed; but for home consumption, little is gained by this operation; while something is lost where one's curd is rich in butter. Some scald new curd with hot water or whey for 15 minutes after nearly all the whey has been dipped and pressed out. This renders the cheese firmer, and less liable to heave or crack. In salting cheese and butter, the quantity used deprives somewhat on the time and manner of applying the same. Much of it may be worked out again in the whey, or butter-milk. Experience is the best guide in salting anything.

Annatto is now generally used to impart a rich golden color to cheese made for market, and in the proportion of nearly half an ounce to a cheese of 60 pounds.

For some reason, the dairy business has never prospered at the South. Either the climate is too hot, grass is too scarce, or our rural population have no taste for the production of cheese, and therefore, none, or next to none, is manufactured. The importation of so much butter and cheese is not so creditable to Southern industry and economy as would be the home production of these important articles. The same milk that will yield 100 pounds of butter will make 200 pounds of good cheese. Some times the difference is more than this; for large dairies in Herkimer county, N. Y. have turned out over 650 pounds of cheese a per cow in year. L.

RESCUE GRASS.

A correspondent and subscriber requests us to give our opinion of the Rescue Grass, which as many of our readers know, is a grass newly introduced into this country, whence is doubtful, and patronized by a Mr. Iverson, of Georgia, who has given it the name it bears, because he asserts it to be a remedy for nearly all the ills that land is heir to, first rate for hay in summer and grazing in winter, and the greatest discovery yet made for improving good land and renovating exhausted soil. We give our opinion reluctantly, because it is almost a personal matter with Mr. Iverson to dispute the merits of his grass, and because we fear we offended him, or came near it, in declining an agency for the sale of it, about a year ago. And really it is unpleasant to fight the battles of the public with every individual who has an enthusiastic admiration for his own stock, grass, grain, pea, machine, implement or invention. Still we must try and do our duty, which is in this instance to say we attach no peculiar value to the *Cenchrus Breviaristata*, or Rescue Grass, of Mr. B. V. Iverson, Columbus, Ga.

The price of the seed, \$5 per peck, with an obligation on the part of the purchaser to raise none for sale, is too much to pay, and it creates a monopoly to which we object decidedly, and which no farmer should desire, if really anxious for "every farmer in the South to possess and cultivate" it.

"Four years" is time enough to establish, by disinterested testimony, some of the merits of this grass, and though a diligent reader of the *Soil of the South*, the *Southern Cultivator* and the *Alabama Cotton Planter*, we have seen no testimony of the kind, so that the "experience" of others seems not to have endorsed Mr. Iverson.

The grass is an annual; and we hold that none of that family of grasses can be invaluable, or very valuable even, as the seed have to be sown every year, or have to seed themselves. In the first case, rye is as good a grass as we can get, (or oats further South), and will grow quite as luxuriantly, on similar soil, as Rescue Grass, and corn sown for soiling must be infinitely better, and capable of producing more green meat on inferior soil. Wheat is well known to be among our most hardy winter plants, and to grow as rapidly, in favorable seasons, as any other.

It makes very good pasture for sheep and calves, and when very rank in growth, and the land is not liable to parch from the treading of heavy cattle, it is sometimes improved by grazing them on it. But nobody expects to grow "as fast as millet or lucerne," and if the Rescue Grass does, we cannot see how "in very rich ground growing "in the fall, winter and spring," it shall reach a height of only "three or four feet." If it does no more than that, rye will match it, at a cost of 80 cents per bushel, and only the labor of sowing the seed, for it may be put in with the last working of the corn, against \$20 per bushel for the Rescue Grass.

Even Cheat or Chess, growing spontaneously on good land, will make fair hay, and under favorable circumstances attains as great height and luxuriance in our latitude as Mr Iverson's grass reaches in the warmer earlier climate of Georgia. In the second case, if left to seed itself it cannot be grazed, or cut for hay, in summer because if it is, it will make no seed, and so we lose the advantage of the pasturage or the hay.

That it will yield from four to six, on an average five, tons of excellent hay per acre, after the stock have been withdrawn the first of June, will hardly be credited by those who know how slowly any of our valuable grasses or grains reach a good height after having been grazed to that period. If any are so credulous, we beg them to look at this statement: The straw of wheat weighs about twice as much as the grain,* and a maximum crop for an acre may be safely assumed at 40 bushels or 2,400 lbs., the straw of which would be 4,800 lbs., and five feet high, so that, to say nothing of the stubble. But 5 tons are 11,250 lbs., or 2 1/3 times more, and fed 1 1/2 times more than grain and straw combined! A pretty fair yield, when we remember that the stock had been only taken off the first of June, and that this grass grows "in the fall, winter and spring only." Assuming June to be a summer month in Georgia, (which we know it was once, for we tried it, and assuming that Mr Iverson cuts hay in July, it follows that the Rescue Grass has one curious property not stated in the circular, viz: that it will make 5 tons per acre and reach a height of four feet in a month without growing at all!

Mr. Iverson's assertions prove too much, and until the laws of vegetable growth are changed, as in the case of Jonah's gourd, we cannot believe that any animal plow will keep cattle well, summer and winter, improve the land, and seed itself. The blue grass so s of Kentucky cannot do it. We do not mean to say that Mr Iverson does not believe all he utters about his grass; he may be an enthusiast, and enthusiasts believe every thing about their idea of the moment. But we mean to say that we do not believe one tenth of what he has told the public. So much we have a right to declare, without just cause of offence, and without being constrained to attack any one veracity. It is certainly fair to allow Mr Iverson to speak for himself, as we have done by publishing his circular, at the head of our strictures†.

For all purposes that we conceive our correspondent to have in view, we believe that it is sowed in the early fall or preferably, at the time of laying by the corn land, that is not destined for Wheat, will answer a better purpose; and we do not hesitate to advise him and every one else, to sow a quantity of it proportioned to his occasions for winter and spring grazing and for summer soiling, than what latter, nothing will better pay most of our Virginia farmers.

P. S.—Since writing the above, we have seen Mr J C Gates, of Chesterfield, who bought last fall one peck of

Rescue Grass and seeded it about the middle of September, on land of medium quality, guarded with 200 lbs. good Peruvian, per acre. He says that now, the 14th day of March, the grass, which has never been grazed, is as high as his finger! This statement is made by his authority.—*Southern Planter*.

THE HORSE.

A LECTURE BEFORE THE MECHANICS' INSTITUTE, BY HON. ZADOCK PRATT, MAR 21ST, 1855.

William Miles, Esq., President of the Institute in the Chair.

Friends and Fellow Citizens:

MR. PRESIDENT—In accepting your invitation to address you this evening, I have selected, as the subject of my remarks, that noble animal, THE HORSE.

It is often said, that as woman holds the first place in the affections of man, the horse holds the second; and so justly is his estimation bestowed, that beautiful woman, so far from resenting this rivalry, joins with man in allowing the horse a high rank in her own esteem.

We cannot wonder at this when we remember the immense amount of benefit which has been derived from this valuable animal. A glance at history assures us that improvement in the breed of horses has kept even pace with the march of civilization; and until the various qualities of the horse were made available for the wants of man, but little progress was made in the elevation of barbarous tribes to the importance of civilized nations.

If the horse has then exercised such an influence upon mankind in general, he is certainly worthy of your attention this evening; and I have the additional assurance of interest, in the fact that he has never before been made the subject of a lecture, to my knowledge.

In the course of a long and active life, which has now extended over the space of three score years allotted to man, I have worn out more than a thousand horses in my service, and a strong love for the subject has induced me to give it more than ordinary attention. My remarks, therefore, will principally be the result of my own experience and observation, with the exception of a few general facts relating to the origin and characteristics of the horse, to which I will first invite your attention.

The horse family is distinguished from all other animals by having an undivided hoof, a simple stomach, and from the position of the teats of the female.

It is divided into two classes: the common horse, with its varieties of work horse, carriage, hunter, and race horse; all of which have important peculiarities, which I shall mention; and that class, the type of which is the common jackass, and which includes the quagga and zebra, not found in this country, and, I may say, not wanted either.

Many conflicting opinions have been held, as to the country in which this valuable animal originated, and two now have many adherents, all others having been given up. These two are Arabia and Egypt. For my own part, I am inclined to think that Egypt is undoubtedly entitled to the palm, and all investigation only confirms me in the belief. Without taking up your time with the arguments on either side, I will only say that the Sacred Scriptures, in describing the early stages of the world, mention the horse as being used in Egypt, while, in much more modern times, when Mahomet fought his battles in Arabia, there was not a single horse in the camp, proving their extreme scarcity, if not their total absence, in the country.

The horse is undoubtedly the most useful and manageable of all animals known to man. In gracefulness of carriage, dignity of motion, and in obedience to the will of his master, he is superior to every other quadruped. Live-

* British Husbandry, vol. 2, p. 154.

† We have, he etofore, published the same, or a similar circular.—*Eds. So. Cult.*

ly, and full of high spirits, he is yet gentle and tractable. Keen and ardent, he is more firm and persevering than any other animal, and all these qualities especially fit him for the purposes to which man has applied him. He works patiently and steadily at the plow, or in drawing the loaded carriage; he deports himself with pride while whirling along the light pleasure vehicle, or jingling the merry bells of the quick moving sleigh. He sometimes dances with delight as he prances along with his martial rider on his back, and he enters upon the race with as keen a zest as his owner, seemingly to exult in success, or, with downcast head, to experience shame in defeat. Whilst ministering to so many multiplied wants of man during life, his remains are applied to many important branches of manufacture, and, though civilized nations make no use of his flesh, it is an important item in the food of many barbarian tribes, where it is considered a delicacy, and a spirituous liquor is made from the milk of the mare, which is as eagerly sought after, as is the intoxicating wine by us. And now let me give you my idea of a good horse.

He should be about fifteen and a half hands high; the head light, and clean made; wide between the nostrils, and the nostrils themselves large, transparent, and open; broad in the forehead; eyes, prominent, clear and sparkling; ears, small, and neatly set on; neck, rather short, and well set up; large arm or shoulder, well thrown back and high; withers, arched and high; legs, fine, flat, thin and small boned; body, round, and rather light, though sufficiently large to afford substance when it is needed; full chest, affording ample play for the lungs; back, short with the hind quarters set on rather obliquely. Any one possessing a horse of this make and appearance and weighing eleven or twelve hundred pounds, may rest assured that they have a horse of all work, and a bargain which is well worth getting hold of.

I will now call your attention to different varieties of horses in foreign countries, and in our own.

The Egyptian horse is generally known by the name of the African barb. He exceeds the Arabian in stature, and is principally remarkable for the fulness and height of his shoulders, and the drooping of his haunches. The most remarkable specimens of this tribe are the celebrated "drinkers of the wind." They are wiry and fleshless, and shaped something like the greyhound. It is related of one of these horses, that he once performed a journey of sixty miles, in the hottest period of a burning African day, without the rider's drawing bridle, or allowing him to relax his speed a single instant, until the journey was completed. The little African kingdom of Doakala is celebrated for a breed of horses of large size, which some have considered as the handsomest in the world. Every attempt to introduce them into any other country has failed, however. The celebrated Egyptian horses were also ridden by the prophet Mahomet and his four companions, on the night of their memorable flight from Mecca, in the year 622, and now known as the Hegira.

The Arabian horses are small, only averaging between thirteen and fourteen hands high, rather inclined to be lean, and in travelling they rise higher from the ground than other blood horses, and gather more quickly. They are generally of a dappled gray, or dark brown color, with a short black tail and mane. They usually run wild and even in that condition, they possess the greatest mildness and generosity of disposition. After they are domesticated, they are played with by the children, have the most favored corner of the tent, and occupy a deservedly high place in the affections of the family. This affection seems to be returned with more than ordinary sagacity, for it is authenticated that, the master being in danger, the horse has put forth every power to the utmost, and so strained his endurance that on reaching a place of safety he has instantly yielded his life. They are usually cap-

tured by snares, hidden in the sand, by which the feet become entangled, and the terrified animal falling to the ground, is made an easy prey. Their amazing speed renders this the only method by which they can be taken.

The Persian horse resemble those of Arabian general appearance, though somewhat larger. They are esteemed less highly than the Arabian, though I think they have some points of superiority.

The horses of Tartary are exceedingly swift, even outstripping the antelope; though here their resemblance to favorite breeds ceases entirely. They are large and heavy-headed, very low in the shoulder, awkwardly made, and very ill looking. When feeding, one of their number is placed on an eminence as a sentinel, and on the approach of danger, he starts off, the rest following like the wind. The fabled flight of Mazeppa, lashed to the back of a wild horse, is supposed to be among the wild herds of Tartary.

In Turkey, horses are held in the highest esteem, which they well deserve, being of the most docile and affectionate disposition. They are the result of a cross between the African and Arabian, and are full of fire and life, with a light make, splendid head, and great powers of endurance. The tail of the horse is considered an emblem of dignity in Turkey, from the fact that a Turkish army once lost its standard in a battle, when the leader, to inspire the drooping courage of his men, cut off the tail of a horse, hoisted it on the end of a spear, and rallied his forces to victory. As a reward he received military promotion, the emblem of which was a horse's tail. The rank of the owner is known by the number of the tails he is allowed, the highest being three, and the officers are called "pachas of three tails."

The genuine East Indian horse is of small value, owing to the unsuitable climate, which seems to be highly unfavorable to his improvement; and the pure native breed is small, ugly and ill made, being equally deficient in form, spirit and endurance. By judicious and repeated crossings, and the utmost care in obtaining healthy stock, a species of a horse has been introduced into the country, which will compare favorably with any other. The greatest and most continued pains are necessary, however, or they will soon degenerate.

The European horses will next engage our attention. One of the most beautiful is the Spanish, or Andalusian, which originated from the Barbary horse, the only fault being that the head is large in proportion to the body; the mane is thick, long and graceful, the ears long, and the eyes very animated. The Italian horses are very large and finely shaped; they were once highly esteemed, but are now principally used for carriage horses, and heavy cavalry. Danish and Swedish horses are stout and well built, but slow and inelegant. The Dutch and German horse is preferred throughout Europe as a draught horse. The Russian horse is large limbed and powerful, with long, stiff hair standing out from the body, and is not very highly esteemed. The French horses differ much according to the portion of the country from whence they come; and the same may be said of the English and American, to which I shall now invite your attention.

I can find no mention made of horses in England, prior to the Roman invasion by Julius Cæsar; and they are spoken of in his commentaries, in terms of high praise. In fact he esteemed them so highly, that he carried several specimens back to Rome, where they and their progeny were in great repute for many years. I think that the first horses known in England, were of a kind similar to the rough shelties of Scotland, and the mountain ponies of Wales and Cornwall, though they were of a larger size, probably owing to the more suitable climate of England, and the better quality of the grazing fields. It is known

that the little hardy, shaggy Scotch pony, with poor fare and rigorous weather, will now increase much in size and appearance under more favorable circumstances. This original stock did not, however, produce the present race of horses in England, they having sprung from foreign horses, first introduced from Europe and Asia about the time of the crusade of King Richard the Lion-Hearted, and then by several succeeding generation of English sovereigns.

It is a matter of historical fact, that the old Norman chivalry, after the conquest of England, always rode the *horse*, and never the *mare*; and churchmen, even of the highest dignity, always rode the *mare* as a mark of their humility.

The native English horses, even in the seventeenth century, were very small, though serviceable, and only commanding low prices. The best were only valued at about sixty shillings, or some fifteen dollars of our money.

In an ancient document, issued some time in the eleventh century, I have seen the legal remuneration in cases of loss of life by negligence, not only of horses, but of other animals, and of men. It is worth repeating. The owner of a native horse, under such circumstances, could claim thirty shillings; for a mare or colt, twenty shillings; for a mule or jackass, twelve shillings; for an ox, thirty pence, or about sixty cents of our money; for a cow, twenty pence; a pig, eight pence; and if a *man* lost his life through negligence, his heirs could recover *twenty* shillings. It is a strange thing in the relative value of life, that though a horse was then esteemed at the low rate of only fifteen dollars, a man was held at a third lower, only about ten dollars. Though horses and men have both advanced in intrinsic value since that day, I am gratified, as an evidence of the intelligence of the present century, that the value of the human life has increased rather faster and farther than that of the horse.

After that time, in the seventeenth century, the breed of horses most in demand was the Spanish Jennet, and they were imported for all purposes of pageantry or war. The aristocracy had their coaches drawn by the gray Flemish mares, which were thought to trot with peculiar grace, and which endured, better than any others, the labor of drawing the lumbering and heavy vehicles of that period, over the then rugged and unpaved streets of London. The very common proverb of "the gray mare is the better horse," applied to those families where the wife is supposed to rule the house, is said to have arisen from the great preference given to these gray Flemish mares, over the best horses of England. It may interest some of my agricultural friends to know that a law was enacted in the twelfth century, prohibiting the use of horses in the plow; and, though it has been a dead letter for a long time, I think it has never been repealed. The celebrated English hunter is supposed to derive its origin from a cross between the race horse and some heavy Spanish chargers, brought into England in the reign of Edward the Third, and they have ever since formed a distinct class. It was during the reign of this king, that horses were first classified, giving us reliable data to trace them down. Up to the period of his rule, one circumstance had operated to keep up the large size and strength of the horse, without reference to his improvement in other respects. This was the immense weight of armour worn by the riders in the time of battle; and the objection could not be removed until the discovery of gunpowder. After this time, the breed of English horses steadily improved; though, long since then, the progenitors of the gigantic horses of the present day were brought from the marshes of Walcheren, and the ancestors of Eclipse and Flying Childers were imported from the sands of Arabia.

Even then, the Duke of Newcastle, considered the best authority in the kingdom, said, that the meanest hack of

foreign extraction, could produce a better progeny than the finest sire of a native breed; and no one was able to forget that the time would come when the princes and nobles of other lands would be as eager to obtain English horses, at an exorbitant price, as the English ever were to procure those of foreign extraction.

Before leaving this branch of my subject, for the American horses, it may interest you to hear some of the stringent laws made to secure the improvement of the breed in England.

That stern and despotic old king, Henry the Eighth, paid particular attention to the matter, and he did not hesitate to enforce the most arbitrary provisions to attain his end. One was, that no brood mare should be allowed unless she was at least fourteen hands high, and to this circumstance we may attribute, in a great measure, the almost total extinction of the small breed of Scotch and Welsh horses. Also, every archbishop and duke were obliged to keep seven stud horses, each above three years old, and not less than fourteen hands high. Every clergyman, whose income equalled five hundred dollars per annum, and every layman, whose wife wore a French, or imported hood or bonnet, must keep one such horse. Any failure to do this, was punished by heavy fines and penalties. Though the rule was so strict upon the nobility and persons of wealth, (for five hundred dollars per annum was then an income of more actual value than ten times the amount at the present day) the common people might keep any mares or horses that they thought proper; the greater expense of the breeding horses inducing the king to render their keeping obligatory only upon the better classes. While upon this subject, I am reminded of the origin of the term "hobby," applied to any particular idea a man may take up, and we frequently hear the expression, he has got on his hobby horse. The term was first used in this way: the Irish horses are small, and of a peculiar appearance, and at one time were much sought after by the whole English nation. They were termed hobbies, and the name of the horse finally became fastened upon those who sought after them so eagerly, and the remark, he has got his hobby at last, came to be used with reference to any other thing which occupied a large share of the thoughts of any one.

Queen Elizabeth repealed most of these enactments of her father, to give greater facilities for the possession of horses suitable for carriages, those articles of luxury being first introduced in her reign. Up to that time, a queen herself possessed no better mode of conveyance than to ride on horse-back, on a pillion behind a gentleman, and in the imposing coronation ceremony, as at other times, the queens did ride in that manner. The necessity of obtaining good horses for so many carriages gave rise to a largely increased demand, which did much to improve the breed, though the number employed excited considerable alarm at one time, so much so, that a bill was brought before the House of Lords "to restrain the excessive and superfluous use of coaches." Fortunately it was not passed, though it is an evidence of the simplicity of our forefathers in that age.

I will only mention one other English horse, before proceeding to another topic. It is "Flying Childers;" the first native born English race horse, and the progenitor of the now unequalled English horse for the race-course. He was the immediate descendant of an Arabian horse, obtained from Aleppo, and as he was the first, so he was the fastest race horse ever in England. He ran over a race-course, three miles, six furlongs, and ninety-three yards, in six minutes and forty seconds. At another time, he ran four miles in seven minutes, and in one single minute he ran within a small fraction of a single mile. This speed has never been quite equalled in this country, the fastest horse being Fashion, and the quickest time being

seven minutes and thirty-two seconds, over a course four miles in length * The great double race, between Eclipse and Sir Henry, has often been spoken of, as one of the best contested and most remarkable. I think that Sir Henry was the best horse, and, in the first race, he beat Eclipse by twenty-two feet. In the second trial, however, he was beaten by Eclipse, by eleven feet, and victory was undoubtedly gained by the superior management of his rider. I refer to the fact as evidence of the necessity of having good riders, and those who thoroughly understand the animal, as well as to have a good horse itself.

Though I am not an advocate of horse racing I consider it an innocent and beneficial amusement, when compared with many others, and I believe the day is not far distant when America may invite every other nation to a trial of horses, and beat them with ease.

With regard to the horses of America, we learn that large numbers were brought over by the early Spanish and English discoverers. The first were imported by Columbus, on his second voyage, in 1493. The first brought to any territory now belonging to the United States, were landed in Florida, in 1527, by Cabaca De Vaca. They were allowed to run loose during the dissensions that followed, and multiplied to an almost incredible extent, especially in South America. Although the climate in South America would seem to be suitable for the proper development of the horse, as it is for cattle, yet he has never attained more than secondary importance. In large wild herds they roam about acting in admirable concert to oppose the attacks of wild beasts, which share the vast wilderness with them. Men have fallen victims to their tenacity in approaching them, and travellers have frequently found their own horses shake off their burdens, break away from restraint and dash off to meet a body of their free companions, if they happen to meet them. The natives take them with the lasso, and only ride the horses, leaving the mares to run wild. They make no attempts to breed, but catch a horse when they need him, and break him to their use by the most violent measures. They never bring them to market, and it is said that a foreigner, who was once riding a mare was so hooted at and pecked by the natives that he narrowly escaped with his life.

The wild horses found in North America when the West was first explored, were more hardy; they were of Spanish extraction, and had been brought into use by the natives to a great extent, though many wild herds of immense numbers still roam freely over the prairies of our Western territories.

The race of horses which originated those now used in this country, and in Canada, were imported from various nations.

In 1603, one horse and six mares were brought to Virginia, from England. In 1625, a few Dutch horses from Holland, were imported into New Netherlands, now the State of New York. In 1601, M. L. Escabot brought the first horse into Canada and Nova Scotia, then known by the Indian name of Acadia. The first horse brought into Massachusetts was from England, and was imported by Francis Higginson, in 1629. In 1678, they existed in considerable numbers in Louisiana. The Indians on Red River, in Texas, used them in 1690. The early French settlers in Illinois, had them in considerable numbers in 1750.

The same vessels brought over the first importations of cattle, sheep and swine, and they have increased so as to form a most astonishing portion of the wealth of the country.

*Mr. PRATT must have forgotten the time of *Lecompte*, 7m. 26s.: since which *Lexington* has made the same distance (4 miles) in 7m. 19s.; both on the Metairie Course, at New Orleans.—EDS. SO. CULT.

In the present year, 1855, the number of horses may be set down at five millions, worth on an average, sixty dollars a piece, and valued in all at three hundred millions of dollars. The whole number of horned cattle is estimated at twenty millions, averaging twenty dollars, and valued at four hundred millions of dollars.

The number of sheep is twenty three million, at two dollars, equaling forty six million of dollars.

The present estimated value of swine, is one hundred and sixty millions of dollars, being thirty-two million head, worth on the average five dollars a piece.

From the small beginnings I have mentioned, the whole value to this country is now the immense sum of nine hundred millions of dollars, and the value of the land used for agricultural purposes is three billion and five hundred million of dollars, the whole covering an area of about three hundred and five million of acres.

The West India horses may properly be classed with those of America, and they generally exhibit the characterizing marks of the nation to which the island may belong.

The Canadian horses are of French origin, and to this stock are we indebted for most of the trotting horses in the United States. It is a marked peculiarity of the Canadian horse that he always trots, as the Arabian horse always canters. Other breeds exhibit all the peculiarities of movement, including the trot, canter, and amble; but the Arabian horse never trots, and the Canadian rarely canters. Besides the trotting horse, we are indebted to Canada for many of the most serviceable specimens of the cart and dray horse, of their size, and in the northern part of this State, in Vermont, and other sections on the Canada line, they are met with in great abundance.

The United States do not, as I have mentioned, possess anything which can be called a native stock, but many of the horses found here, are superior to any others, owing to judgment in crossing breeds, care in raising, and by a close observance of all circumstances which will improve good qualities and correct defects, so that I may say, without hesitation, and after long observation, that they combine all the excellencies of other nations. It was supposed that the horse sent from Morocco to Gen. Jackson, and the Muscat horses sent to President Tyler, would materially improve the American race, but they were small though justly made, and I think the country has derived no benefit from their possession.

Much of this excellence is obtained by changing a horse from one section to another, provided the change of climate is not one which will have a deleterious effect. Thus a horse brought from the Western prairies to the seaside, soon gains in weight power of endurance, and value; and the same is observed when an Eastern horse is carried West. A horse with the heaves taken from New York to Illinois will be cured of the disease, and I have noticed many other favorable changes. Still there is always more or less necessity for acclimation, but a judicious course of management will result in much good to the horse. The change, however, will be injurious, if the new climate is not healthy. Thus, a horse taken from here to South Carolina, soon depreciates and becomes of less value. A horse taken to Mexico, feels the change of climate at first, very sensibly, but the purity of the air, and the excellence of the feed, soon adds largely to his usefulness and value, and he is much more highly estimated than the native Mexican mustang, which partakes of the uncertain and flighty character of the people who raise him. A horse brought from Kentucky or the Western States, or from Canada, requires about a year to become acclimated to our section. Our own horses, when taken West, are deemed far superior to any others. On a trip to Kentucky, I was riding on a stage and asked the driver where he obtained his horses. He replied that they

came from Northern New York; that they were brought out there by some parties who had a mail contract, and were liked so well that they always kept them. Their own, he said, arrived at maturity earlier, but did not last half as long, that the New York horses far exceeded them in endurance, and that there was no such thing as driving them off the track. The Kentucky and Tennessee horses are good for the saddle, but not for the collar*. In fact custom is everything, and though it will sometimes do much towards training a horse for uses to which he is naturally unfit, yet, any horse accustomed to the harness can rarely be made serviceable for the saddle, and a good saddle horse is soon spoiled if the collar is put upon him. As the God of nature has not endowed any one man with all knowledge, so he seems to have distributed the qualifications of animals, in such a manner that judicious management will make each superior in a different and distinct sphere. I was once in Boston looking at the immense truck horses, and enquired where they came from. I was told that they were obtained from the highlands of New Hampshire and Vermont. They were better for that purpose than any others, while for the lighter spring carts of this section, the heavy eastern horse is not so suitable.

The slow Canastota horse of Pennsylvania was formerly used in teaming over the Alleghenies; they weighed from fourteen to sixteen hundred pounds; and I have found from experience, that they had not the endurance to labor as the horses of our section.

Once the custom was to esteem the Narraganset pacer as the best horse in the country; but that was prior to the Revolution, and before my time, though I well recollect several fine specimens of the breed.

The horses of Carolina, Georgia, and other Southern States, cannot work as well as those of a more temperate climate. In fact, I have frequently observed that the horse attained a higher degree of excellence in a temperate section, while mules and the darkey were fitted for the South.

No horse can endure labor all the time. A few months in the pasture, after being high fed, and worked for several years, will renew his energies, as stated periods of rest and recreation will preserve the vital energies of man unimpaired through a long life; and by a wise law of Providence, which is as beneficial to the beast as to the man, a horse will do more labor in the six days than if he were worked the whole seven.

In reference to the peculiar excellence of the horses of this State, I might say that I have driven a pair two hundred and forty miles in three days, or eighty miles per day, without injury. Amongst the many hundreds and perhaps thousands of drivers and teamsters in my employ, I had a slow-moulded man by the name of Dana Brown, who drove for me some ten years, and always drew the largest loads in the same time, and with less fatigue to his horses, than any other driver I ever knew. His horses would look better on the same feed than those of any other, and they always appeared in good condition, while those in charge of others gave unmistakable evidence of improper usage. Forty, fifty, and even sixty hundred weight has he drawn over the Catskill mountains with one pair of horses, and I am only doing him an act of justice, to say that he never wore out a lash, and hardly a snapper in the whole time. Whilst other teamsters had sick horses, his were always in good condition. The whole number of teams I had in one year, averaged in

every three working days, 2,600 pounds to Prattville, and 3,000 pounds to Catskill, a distance of 36 miles, making about two and a half millions of pounds in all. I mention these facts, as illustrating the great benefit of good management of horses, and of good roads.

In feeding a horse, it should be remembered that corn has a tendency to make him slow, as may be witnessed in the slow moving corn fed horse of Ohio. Oats are more suitable to develop all his qualities, and from twelve to sixteen quarts per day should be given.

With regard to the *natural* longevity of a horse, nothing can be said with certainty. They have been known to live thirty or forty, and in some rare instances, even sixty years; but ill usage frequently destroys them before they are nine or ten. I think that under ordinary circumstances, fourteen years would be a fair average.

Too much importance cannot be placed upon the judicious breaking and management of this noble animal. It should be like that of a child. By no other means can he be reduced to a cheerful and ready obedience. A sullen and dogged submission will result, it is true, from cruel and brutal treatment, but a prompt and eager response to the wish of the rider can only be obtained by patient kindness. I think there are few horses baulky by nature, and I believe most are made so by drivers who are blessed with far less brains than the horse himself has. History has brought down to us the beautiful story of Alexander and his horse Bucephalus. It is probably familiar to all, but as an eminent illustration of my meaning, it will bear repetition.

King Philip, of Macedon, had a noble horse sent from Thessaly. The price charged was about twelve thousand dollars of our money. The king went into the plain, attended by his court, in order to make a trial of him, but he appeared so very fierce, and reared so when any one approached, that no one dared to mount, or go near him. King Philip, angry that such a furious and ungovernable animal had been sent him, ordered him to be returned. Alexander, who was present, exclaimed, what a noble animal they are going to lose, for want of boldness and address to back him. Phillip at first considered the words the effect of folly and rashness, so common among young men. But as Alexander insisted upon what he said, and was very much vexed to see such a noble animal sent away, his father gave him permission to see what he could do. The young prince, overjoyed at the permission, took hold of the bridle, and turned his head to the sun, having observed that his shadow was the principal thing that frightened him, he seeing it dance about, and sink down as he moved. He, therefore, first stroked him gently with his hand, and soothed him with his voice, then, seeing his fierceness abate, and artfully taking his opportunity, he let fall his cloak, and springing swiftly on his back, first slackened the bridle without startling or vexing him, and when he perceived his fire was cooled, and that he was no longer furious, or violent, and only wanted to move forward, he gave him the rein, and spurring him with great vigor, animated him with his voice to the full extent of his speed. While this was doing, the king and his whole court trembled, with fear, and did not once open their lips; but when the prince, after having run his first heat, returned with joy and pride, at having broken and subdued a horse which was considered absolutely ungovernable, all the courtiers endeavored to outvie each other in congratulations and applause, and we are told that the king, his father, absolutely shed tears of joy, and embraced Alexander after he alighted, and kissing his head, said to him, my son, seek a kingdom more worthy of you than this, for Macedon is below your merits. This fact was the beginning of that career of unexampled success which only ended when Alexander the Great wept because there were no more worlds for him to conquer.

*We regard this as altogether dependant upon the training of the animal; but fully agree with the lecturer in his subsequent remarks respecting the importance of keeping saddle horses for the saddle and harness horses exclusively for the shafts. The so-called "horse of all work" is generally like the "jack of all trades"—perfect in nothing.—Eds. So. Cult.

On the subject of the diseases of the horse, and other points concerning him, as nearly every one is his own doctor, I will get over that point very quickly.

There is one thing to be remembered, however, in obtaining good horses, which must receive attention, or the stock will inevitably depreciate. It is, that the same stud horse should never remain in the same locality more than three or five years at the farthest. The constant mingling together of the same blood in the human family leads to both physical and mental depreciation, as is peculiarly illustrated in some of the old crowned heads and aristocracy of Europe. Owing to their prejudices against other classes of society, they have intermarried with each other, until they have become so closely related, that they are far inferior to the common people. It is a fact well known that the lower branches of the European legislatures possess far more intellectual ability than is found in the aristocratic branches, and it is from this cause. The superiority of the American race is mainly owing to its freedom from prejudices of rank, so that marriages are made without reference to absolute high social position. The same rule holds good with all inferior animals. There is hardly any farmer who is not familiar with the fact, as applied to his poultry yard; and, as I said before, it is of immense importance in keeping up the good qualities of the horse; so much so, that great disappointment will surely result, if it is forgotten.

In conclusion, I desire to say that the history of the horse, can hardly be entered into, without obtaining a general knowledge of the various epochs in the history of the world, and in that point of view alone, it may be considered a matter of no secondary importance. Though apparently only a research into one branch of natural history, it opens a field of examination into the manners and customs of different ages, and exhibits the gradual, but sure march of intellect and intelligence, from one generation to another.

In the management of the animal itself, a profound moral is exemplified for the culture and progress of the human mind; and, like Alexander, he who has the judgment and natural force of will, to render subservient the noble and untamed horse, has the power to wield no mean influence upon the age and country in which his lot is cast.

It is impossible to do justice to the subject in a single lecture, but if I have called your attention to it in such a manner that you will pursue it in all the various branches to which it will lead, my end will have been attained.

Oftentimes the most simple subject will lead to great results. I have frequently felt that any position attained by myself, has resulted, next to the favor of my fellow-citizens, from a habit of studying the most apparently insignificant things presented to me, until I learned whether they contained a moral or not. The great object of living is to be useful, and an earnest investigation of whatever subject is presented, a patient development of truth, and its application to our own lives, and to those around us, will develop a large and extended philanthropy, and will surely lead to a bright and genial old age, radiating happiness and usefulness all around; and the evening of our lives will exhibit the effects of our exertions and labors, till night shall have blotted our forms from sight, and nothing is left, but the intangible, though ever present, influence of our course through the world.

At the conclusion of the lecture, Charles H. Detman, Esq., Chairman of the Lecture Committee and Corresponding Secretary, proposed a vote of thanks to Col. Pratt for his able and eloquent address, which was passed unanimously.

AGRICULTURAL PROGRESS IN ENGLAND.

We know not what better heading can be given to the following highly interesting and instructive address before the London Farmers' Club than the one above selected. No living man has done more than Mr. MECHI to promote agricultural progress in England; for he practices at Tip-tree (his country seat) all that he preaches in London, where he is a shop-keeper, or merchant. He irrigates 170 acres by steam power, conveying liquified manure to every acre in iron pipes not unlike those used in American cities for the distribution of illuminating gas. Particular attention is invited to the statement that "twelve parts in thirteen of all the manure made by human beings escape as liquid; only one thirteenth part being solid." This is given on the authority of recent researches made by Prof. MAY, chemist to the Royal Agricultural Society of England, and unquestioned authority. He means exclusive of water contained in fecal matters. Three-fourths of these are simple water, on an average.

Such of our readers as question the economy of irrigating crops in the planting States, should pause and reflect when they come to these words:—"Those who doubt the cheapness at which water can be raised may be assured by visiting the Croyden Water-works, where 650,000 gallons are forced to the distance of a mile, and elevated 150 feet, at a cost of 13 1-2 cwt. of dust coal per diem of 24 hours."

By reducing these "cwt." to pounds, it will be seen that 1502 pounds of coal dust, (refuse coal) force 650,000 gallons of water a mile and raise it all 150 feet high. On most plantations, two field hands will cut and haul to a steam engine, wood equivalent to 1502 pounds of coal in ten hours. Allow a gallon of water to weigh 8 lbs., and multiply 650,000 by 8, and it gives 5,200,000 lbs. of water forced, as above stated, by 1502 lbs. of coal; making a pound of coal lift 3455 pounds of water 150 feet and over, high. It is worth a visit to Croyden Water-works to see a pound of coal lift thirty four hundred and fifty-five pounds of water one hundred and fifty feet into the air, by any machinery whatever. The Edinburgh dairymen who pay £21 a year, or about \$100 rent per acre for irrigated grass land, sell milk just half its price in Augusta and Athens:

"Mr. Mechi, who, on rising, was received with cheers, spoke as follows:—"One hundred years hence, which is not long in the history of a country, our successors will scarcely believe that a nation wanting annually many millions of quarters of grain to fill up its own inadequate production of food, should waste the only means by which such deficiency might be made good. I mean the productions of the land when they have fulfilled their office of nutrition to man and beast. Every one now at all conversant with the theory of modern agricultural chemistry must know that our agricultural produce loses little by such a process, and that the bulk of its elements are returned to us in the shape of excrement if we take the trouble to collect them. I am aware that the practicability of doing so has been questioned; but I purpose this evening to show that there is no difficulty in the matter, except what exists in the brain of man. The same power that brings your water into London will take it out again; for according to Prof. Way and other chemists, 2,500,000 inhabitants will only add 3760 tons in solid and fluids to the quantity of water.

"If agriculturists studied attentively Prof. Way's able paper on Town Sewage (see *Royal Agricultural Society's Journal*, vol. 15, part I, page 135), it would teach them a great and profitable lesson. They would learn that of all the manure made by human being (and I have no doubt by animals) 12 parts out of 13 in weight escape as urine, only 1-13th part being solid! Well may farmers love the

sheep-fold, and well may they deplore yard feeding, where the rains from the untroughed roofs may, in too many instances, thus take away nearly all their manure. Mr. Way, with his usual care and exactness, has found that, taking the average of men, women, and children, each individual of the population will, in the course of 24 hours contribute to the sewage of a town one-quarter of a pound of solid and three pounds of liquid excrement. A knowledge of these facts shows us how trivial is the question of solid manure, for at a quarter of a pound each daily the total solid manure of 2,500,000 people in this metropolis will only weigh 279 tons.

"According to Mr. Way, the excrement of each person is diluted with or distributed through 20 gallons or 1400 times its own weight of water. It must appear singular to a disinterested observer that whilst farmers seek eagerly after every new manure, and are subjected to much imposition in such purchases, they appear to be apathetic on the question of town sewage.

"I think much of this neglect must arise from the fact of its being in a fluid state, for to the distance of 100 miles from London the solid manure of the metropolis is purchased by agriculturists at an expense of from 4s. 6d. to 6s. per ton, one-half of this cost being, of course, for freightage, and then another 30 to 50 per cent. must be added for cartage to the fields, with a further charge for turning over, spreading, plowing in, &c. Omitting the sanitary consideration, there can be no class so deeply interested in the question of town sewage as the British farmer. Those sewers carry away to our rivers all the products which he has at so much care and cost produced for the food of the people. To repair the exhaustions caused by these supplies, he rushes to Peru for birds dung, at an expense of some millions, whilst the very grave-yards of foreign nations are taxed to supply bones for his Turnips. The rapid increase of water closets and new sewers, with a more abundant water supply, are daily lessening the supply of human excrement in a solid form, diminishing, in fact, *pro tanto*, the ordinary channel of supply, so that shortly we may expect that only the stable manure and ashes of London will be available for agricultural purposes, whilst the weekly supply of 6000 or 7000 bullocks, 40,000 sheep, and all the other vast solid and fluid consumables of the metropolis, from tea to turtle, will be floating down the sewers unheeded and unsolicited.

"This cruel neglect can only arise from a disbelief of the value of such manure, or from a doubt of the possibility of applying it economically. I purpose therefore this evening to go into statistical details with a view to ventilate the question, and to prove how easily such an operation may be successfully carried out with individual and general benefits. Water alone is manure: who can doubt this? Look to the costly water-meadows in various parts of the kingdom, and what farmer who has a water meadow does not appreciate its great value to him, as producing early, late, and most abundant vegetation? My own experience, with two miles of pipes on my farm of 170 acres, has proved that fluid applications of manure are far the most profitable, and that their influence is quite as important and advantageous to cereal as to other crops. In proof of this I have threshed some fields of Wheat, producing 6 quarters per imperial acre;* Oats, 13 quarters, and Barley, 8 quarters, which latter is 1 quarter more than I estimated in my balance sheet. Now, such productions as these on a naturally wretched soil, prove more than volumes of argument, and I have no hesitation in saying that had my neighbors to pay £2 per acre annually in interest for improvements over and above their present rent,

to obtain similar results, they would be considerable gainers. If it answers my purpose to lay down pipes, erect an engine, make tanks, erect pumps, and so on, for the in a fluid state with a large supply of water from my mere purpose of applying the manure made on my farm spring, surely it must equally and more certainly pay a farmer to receive back his corn, bullocks, sheep and other productions after they are done with at a very much smaller cost; for their very essence will return to him accompanied by all the good things that metropolitan luxury can command from every foreign part. If we go into a statistical inquiry of the weekly supply of London in tea, coffee, and sugar; wine, spirits, and beer; fish, flesh, and fowl (foreign and British); the tons of soap, and the thousand and one refuses of our manufacturers, gas-works, &c., one becomes amazed at the fructifying power involved in such a consideration. The alkaline and granited solutions of our London pavement by trituration and abrasion, the smuts from our smoke, have all a considerable value.

"The mere wear and tear of shoe-leather has its value, as it grinds down the pavement into hollows. I apprehend that the daily cost of feeding each individual in this metropolis, taking the average of rich and poor, young and old, would not be less than 10d. per day, or 37 1-2 millions sterling per annum. Now in parts of Lincolnshire it is the custom to value the manure at half the cost of the oil-cake consumed. On this principle, which appears to be a sound one, the agricultural value of the manure from this 37½ millions of food ought to be something very considerable, to say nothing of the food consumed by the animals of the metropolis. The rubbing, washing, and agitating which the solid excrement receives in passing through miles of tortuous sewers, cause it to be dissolved and pass away in a fluid state, which we may any day prove by an examination of the sewers' mouths at low water. I think farmers cannot be aware that all the solid and liquid manure of men and animals is liquidifiable by solution or suspension, and can be applied in a shower, sinking deeply into the subsoil of drained land. Perhaps I may be here permitted to explain why I consider this mode of application far superior to the solid form. If you make a transverse cut or opening in the soil, you will find that the British agricultural pie-crust is only 5 to 8 inches thick. The slips and railway cuttings plainly reveal this humiliating fact. Below this thin crust we see a primitive soil, bearing most unmistakeable evidence of antiquity and unalterability. The dark shades of the cultivated and manured surface have not been communicated to the pale subsoil; and we have evident proof that solid manure plowed in, in the ordinary way, exercises little influence on the subsoil. Nor can this be wondered at, when the plow sole has been polishing and solidifying the floor at the same depth for the last few centuries. Now, when I apply liquified manure (which means all the solid and liquid excrements of the farm animals mixed with water), it soaks deeply into the subsoil to the depth of the drains, which I have seen, on the very strongest clays, discharging the liquified manure at a depth of 4 and 5 feet. Here, then, is the secret of my great crops on a miserable soil. The manure vitalises, warms, and chemically changes the miserable subsoil; the roots of the growing crops know this, and send down their fibres or mouths to appropriate and elaborate the subterranean treasures now for the first time placed at their disposal in an available condition. I could show you 20 loads of rich oil-cake bullock pudding, or manure; I would mix it with water, apply it in a shower, and you should search the surface in vain for any proof of its whereabouts. It has gone down to do its work. I will not drag you through all the details of the *modus operandi* of this method of manuring; you may see it all any day you choose on my farm, or on any of those of others who are practising the same process. What I want you to believe is, that town

* The "quarter" of English agriculturists is eight bushels; so that the yield of wheat was 48 bushels per imperial acre of 4 rods, each 46 perches or rods.—EDS. SO. CULT.

sewage is liquid guano, applicable to every soil and every crop, and worthy of your utmost attention. It is true that undrained land, requiring drainage, such as heavy clays and spring soil, must undergo that operation before they can derive the benefit of such an application; but there are extensive tracts of chalks, sands, and hot gravels, almost praying to be fertilised by the sewage of our towns.

"Although I apply my liquified manure on the surface, I am quite convinced that during the summer season and amongst the growing crops, it would be far more advantageous to apply it subterraneously, as effected by Mr. Wilkins last year at Wokingham, and this year at Reading. By this means, the openness and tillage of the surface is undisturbed; the rays of heat and light are employed in warming the earth, and evaporating from the leaves, the subterranean supply of fluids which the plants absorb by their roots, and which arise to them by capillarity. The question is a large one, involving considerations of cost, but most certainly production is vastly increased and stimulated by the new method.

"One important reason for the superiority of liquified over solid manures, is, that water is the great arrester and conveyance of ammonia, that invisible and truant spirit which is ever escaping unseen from reeking dung heaps. It is this ammonia which dissolves the silica of the soil, and makes the kernel of our Wheat, and the lean of our flesh; and it is for this ammonia that we so affectionately prize unwashed Peruvian guano, or bird's dung. When you have learned to apply fluid manure to the soil, you will find your crops yield as much as they do after the sheepfold, and you will get corn as well as straw, that is, if you do not sow too much seed.

"You must give up all hopes of obtaining town sewage in a solid form, for Professor Way's able paper (which every agriculturist should read), in the Royal Agricultural Society's Journal, and other evidences, are conclusive on that point. I understand upon good authority that the commissioner of sewers have decided that a main tunnel on the south side of the Thames shall receive the sewage of 1,200,000 people, convey it to Plumstead marshes, whence it will be pumped in a reservoir, and at high tide pass away with the flood water of the Thames, that is if British agriculture is insane enough to permit such a cruel waste.

"The question will arise who is to undertake this? Now, in railroad undertakings we find landed proprietors and other interested parties joining with town capitalists, and affording them every inducement and opportunity to open up a country with general benefit. Let the same be done with sewage. Depend upon it, without this co-operation no town capitalists will be so miscalculating as to place their capital at the mercy of local prejudice or neglect. It therefore remains with agriculture itself to determine whether this interesting question shall receive its proper solution. But supposing that the new company has laid down its main line of pipes for the country distribution, where will you find the £3 per acre for the network of iron pipes, &c. requisite on every farm. It appears to me that where the capital is required it may be readily obtained from the Lands Improvement Company or Land Drainage Company, and that the annual charge which would liquidate principal and interest in a few years would leave a large margin of advantage for both landlord and tenant. To those who desire to see the mode of applying town sewage may be quoted the instance of G. H. Walker, Esq., who takes the town of Rugby &c.;—Worsley, Esq., of Rusholme Park, near Manchester, who uses the sewage of a neighbouring district. In both these cases, steam power is applied, although I think Mr. Walker's pipes of 2-inch diameter are hardly large enough for the diameter of his pumps.

"Of course if the London sewage is used, I apprehend

it would be pumped to elevated district reservoirs, whence it would flow from main pipes connected with smaller ones on the various farms, so that they would be always charged with a sufficient pressure to cause a jet; this would render unnecessary any steam engine or tank on the farm. A register of quantity like a gas meter would enable the company to make their periodical charge. I annex the following statistical account with which I have been favored by Edwin Chadwick, Esq., C.B., our greatest authority in such matters:

"The gross daily quantity of water pumped into the metropolis was in the year 1850, 44 million gallons. It may have been increased some what since that time, but I should expect that it would still be within 50 million gallons per diem. I proved at that time that about three-fifths of the quantity pumped in was wasted on account of the intermittent methods of distribution. The actual quantity consumed for domestic purposes, or that you could estimate for sewage as containing house refuse, or house manure in suspension or solution at times when there is no rain applicable as manure, would not be more than 20 million gallons per diem. I say house manure, because rain and storm waters bring as surface washings, dung from the streets and soot and birds dung from the roofs of houses. You may judge of the daily quantity visibly by the fact, that 45 million gallons would be delivered in 24 hours by a brook 9 feet wide and 3 feet deep, running at the rate of 3 feet per second, or a little more than 2 miles per hour, and 3 sewers, of 3 feet diameter, and of a proper fall will suffice for the removal (for distribution) of the same volume of refuse or soil water. The total weight of this annual supply of water is nearly 72 millions of tons. The daily cost of raising the whole supply by engine-power 100 feet high (for distribution) would be about £25, or £9,000 per annum. Supposing the supply were equally distributed, i. e., the 44 millions, it would be about 50 pails full for each house, and would weigh about 13 cwt."

"Those who doubt the cheapness at which water can be raised may be assured by visiting the Croydon Water-works, where 650,000 gallons are forced to a mile distant, and elevated 150 feet, at a cost of 13 1-2 cwt. of dust coal per diem of 24 hours. With regard to the mode of conveyance, it appears to me that our railway lines might be availed of to lay down lines of pipes, but of course all such questions would be easily arranged by competent engineering authorities. Perhaps it will be as well to state, that 15 yards of 3-inch iron pipe per acre, will be all that is required, or about 5 1-2 cwt. of iron per acre: this is the quantity on my farm; I have 170 acres piped. Amongst numerous papers that I have written on this subject, I beg to refer to one under the head Sewage, in *Blackie's Cyclopaedia of Agriculture*. The value of London sewage has been variously estimated; but Professor Way, in his usual careful way, has calculated it by its ammonia at two millions sterling. He has made no valuation of the water alone; I apprehend that 50 million of gallons daily, or 224,000 tons would have, even when unmixed with manure, a considerable irrigating value.

"In order to ascertain whether this application of sewage will pay the farmer a profit and leave a sufficient interest for the capital invested by a company, let us calculate 72 million tons of sewage at one penny per ton, would be £300,000. Now, take the pumping or raising this quantity at the exaggerated sum of £50,000 annually, there would remain £250,000 as interest on the capital invested, which, at six per cent, would be also the exaggerated sum of £4,000,000 sterling.

"I have assumed the sum of one penny per ton as representing that which would leave the farmer and landlord a very large profit on their pipe investment. I can confirm this by my own practical experience. But it must be obvious to any one who reasons, that as 100 tons of

water per acre represents a rain fall of 24 hours, this alone, without the saturation of manure, must be worth one penny per ton, or 3s. 6d. per acre, and indeed in dry weather for Grass crops very much more. As to the quantity required per acre, Mr. Telfer, of Canning Park, Ayr, tells me that he applies 500 tons of water per Scotch acre at five dressings to his Italian Rye-Grass, with five cwt. of Guano at each dressing, making a total annual application of 25 cwt. of Guano per Scotch acre (one-fourth larger than the English acre). This is in a naturally moist climate, therefore, we may estimate the water absorbing power of the barren sandy wastes in the neighborhood of the metropolis far more considerable. That those wastes would be rendered highly productive after the application of town sewage cannot be doubted.

"The experiments of Mr. Wilkins, who grew two crops of Hemp and Flax in one season at Wokingham last year settle the question. Now, if you apply 500 tons per acre you will only require 152,000 acres to absorb your 76 millions of tons. As 640 acres are a square mile, you would at that rate require 237 square miles, or a square area whose diameter would be about 15 miles. I have a strong conviction that a very much larger quantity of sewage say 1000 tons per acre, at least, may be profitably applied to our sandy, gravelly, and chalky wastes. This would afford a great economy in distance and expense. On the Edinburgh meadows as much as 6000 tons per Scotch acre are applied; but that appears to me hardly a necessary quantity. Still, if such large quantities could be applied to so limited an area, it is clear that instead of one penny per ton the cost need not much exceed one farthing. Six thousand tons at one farthing per ton would be £3 5s per acre. This would pay; for the average letting of the Edinburgh meadows to the cow-keepers was, I am informed, last year £21 per acre—a pretty good evidence of the beneficial effects of town sewage on waste lands that were, a few years since, worthless and barren.

"I apprehend no one will doubt the economy of transmission of fluids by tubes, seeing that by road carriage the charge of carting near the metropolis would be at least 8d. per ton, per mile. There is no fear of our being overwhelmed with cheap hay or supper abundant milk by this process, for our metropolitan wants become annually more and more gigantic; but I do know, from extended and minute observation, that the infants and juveniles of this metropolis would present a very different muscular and general development if this scheme were carried out; for now the wretched wrecks of noble short horned cows, observable on every green patch around the metropolis, speak volumes of the thin sky-blue [milk] which is vainly expected by fond parents to form the bone and flesh of their dear children. Their pallid faces and feeble limbs present infallible evidence of defective nutrition. In conclusion, I do hope that this club of practical agriculturists will, by their resolution this evening, stamp their opinion of the necessity for this great national economy. (Hear, hear, and cheers.)"

MORE PROVISIONS AND LESS COTTON.

A CORRESPONDENT of the Newberry (S. C.) Mirror, thus urges our oft-uttered advice to our planting friends:

"This suggests the propriety of growing more Corn than will be necessary for plantation purposes—there must be some for sale. And if it should not be wanted at the close of the season, just turn it into meat—this will save the trouble of purchasing at a high price, and sending your cotton money out of the State; which at present generally needs it. It might be well to set off unusually large lots for the growth of the Sweet Potatoe, which always yields well when there is a medium or a wet season. Should more be grown than is wanted for the table

—let them go to the stock lot—they are fine for hogs and horses. Peas too, the Cow Pea of course, always gives a good return for the planting, and planting is nearly all the trouble. One of the best articles for good milk and butter in the winter, is the pea ground with corn, about half and half. Let those who have not tried it, go in for the luxury.

Those who have small pieces of wet land would do well to level them for meadows, or plant them in Rice, either will give a good return for the labor. Rice grows well in this climate, has done exceedingly well on Tyger River, in Spartanburg District. It can be threshed out like oats, and sold for a good price in the Charleston, not to say, in the Newberry Market. This country is going a little too much to Cotton; this is a fine marketable article 'tis true; but it is best to have every thing else which can be raised on the farm, it is so convenient. Indeed it is best to be a little in advance; to be full, then the pinch of a dry summer, or long winter, could be endured much better. There is a luxury in a well stocked plantation—there is life and beauty in it. The neigh of the horse, the low of the cow, the bleat of the sheep, the grunt of the hog, the gobble of the turkey, the crow of the cock, the gabble of the goose, the jabber of the duck, the chatter of the guinea hen, and the scream of the pea fowl. Let them all raise their chorus, and there's life for you! Then full cribs of corn, barns full of hay, fodder oats, peas, wheat and rye, there's independence for you! But how lank everything looks where all is cotton, corn cribbed in a small pen, wheat in a goods box! Oats ditto, peas ditto, potatoes none at all! Fodder stacked round a few poles in the field! The cotton is sold for six or eight cents, and a good deal of it laid out for provisions—almost every thing to be bought, and cotton is the purchaser!

Would it not be best, just to grow all these things on the farm, and what cotton is made over that, let it be the extra? Certainly it would—every body says so. Cotton, Cotton, Cotton! Making it the prime crop, and every thing else subordinate, is not best for the farmer, and it is not best for the country. *Certum pete finem.*"

PNEUMONIA, COLDS, &c.

EDITORS SOUTHERN CULTIVATOR—Gentlemen—As this is the season for taking cold, which often results in pneumonia, pleurisy, &c., and frequently leaves the sufferer with a hacking cough which eventually terminates in consumption. To prevent all this I will send you a recipe. For a grown person use the following:

- 1 tablespoonful of castor oil,
- 20 drops of spirits of turpentine,
- 1 teaspoonful of paragoric,
- 2 drachms of antimonial wine,
- 2 teaspoonfuls of nitre,
- 1 tablespoonful of honey.

Drink warm when about retiring for the night.

Yours respectfully,

from an old subscriber, E.

Havana, Ala., April, 1855.

SERVING COWS SO AS TO SECURE MALE OR FEMALE CALVES—It will be recollected that a French gentleman, Count de Gourcy, had tried the experiment in France, of putting the bull to the cow before milking, and he secured a large proportion of heifer calves; and by putting the bull after milking, he secured a large proportion of bull calves. B. V. French, Esq., of Braintree, Mass., writes us, Feb. 3:—"I to-day, have examined my account, where I was certain of impregnation of cows: 3 with empty bags brought 3 bull calves. 27 with full bags brought 18 heifers and 9 bull calves. So the choice is in favor of heifer calves, when impregnated with a full bag, but not so much as expected. I shall continue this method for a while longer."



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 5..... MAY, 1855.

ANSWERS TO INQUIRIES, &C.

MILLET.—L. R. B.—One bushel per acre will be plenty. Sow in drills on your very richest land.

AGRICULTURAL FAIRS.—C. P.—Your remarks and strictures are to the point; but something similar has been published in our journal, not long since. The Georgia Fair of the present year is to be held in Atlanta during the week, beginning on the 10th of September. We sent you a paper containing the Premium List, per mail.

HEDGES.—A. M. P., of Ala.—Yes! we do believe as strong as ever in the Osage Orange; but to make satisfactory growth, the strip of land on which your hedge is planted must be either naturally rich or made so by the use of a compost of good stable manure and leaf mould. A single row of plants, ten inches apart, is all-sufficient. Follow our previously published directions in regard to after-culture, trimming, &c. Especially, do not be afraid to use the knife freely, during the first year or two. A hedge, to be of any practical value, must be so close at the bottom that a rabbit cannot get through. We have some faith in the "Spanish Bayonet" (*Yucca gloriosa* or *Y. Ohnifolia*?) or "Adam's Needle," as a defensive hedge plant; though our friend, THOS. AFFLECK, of Miss., (good authority) says it will not do. One of our correspondents (vol 11, for 1853, p. 121) intimates that it may be kept close at the ground by the repeated cutting down of the trunk with a long-handled saw. Has any one given it a fair trial? Mr. AFFLECK speaks very highly of the *Crataegus* [*Mespilus*?] *Pyracantha* or "Evergreen Thorn," both for ornament and defence. This is an evergreen, quite thorny, and will grow from cuttings; all of which are good points; but we still continue to "pin our faith" on the Osage Orange, while holding ourselves open to conviction. You remark truly, that "hedges we must have sooner or later, as rail timber is rapidly wasting away; and ordinary rail or plank fences are no protection against thieves or fire; to say nothing of their speedy decay and need of continual repair."

THE JAPAN PEA.—R. L. C., Burke Co.—This Pea is not the "Java" (Cow) Pea. The former has a strong, upright stalk, heavily laden with pods, each of which contains two very beautiful cream or ivory colored Peas. They are good to eat; but it is slow work to shell them. The stalk may be good for fodder. We have not tried it. It is rather a handsome plant—a little like the Windsor Bean in its habit. We can send you seed in the fall.

STRAWBERRIES.—A. J. S.—See directions in *Work for the Month*. We have now over 30 distinct kinds in our specimen beds, besides large "patches" of *Hovey's*, *Early Scarlet*, *McAvoy's Superior*, &c., &c. Will supply you with plants in October. Mr. PEABODY's general system is an excellent one; but we have little faith in the expediency of attempting to produce this fruit more than

3 or 4 months in the year. Between August and the following April you may, by mulching, constant watering, &c., raise "here and there" a berry; but to look for a full, "paying" crop of fruit during the latter part of summer or the cold and changing weather of fall, winter and early spring, is altogether unreasonable. See Pat. Office Report for 1853, page 314, for the article of Mr. PEABODY. Also, our journal for October, November and December, 1854, for a series of articles on this subject.

ESSEX PIGS.—H. R. W., Macon Co., Ala.—This breed is a jet black, of medium size, rotund form, excellent fattening properties, and, we believe quite hardy and prolific. See engraving on page 157 of present number. They may be ordered from the following gentlemen: *South*—R. PETERS, Atlanta, Ga. *North*—C. S. WAINWRIGHT, Rhinebeck; and LEWIS G. MORRIS, Mount Fordham, N. Y.

"RESCUE GRASS." &C.—T. P. L.—See article from the *Southern Planter*, in present number. Your favor will appear in our next.

TINLEY PEACH.—G. R. K., Holmesville, Ala.—We answered your inquiry respecting this really fine fruit, in a former number. ROBT. NELSON, of Macon, Ga., can supply you trees next fall.

CLOVER IN THE SOUTH.—J. C., Ala.—We will cheerfully copy the article alluded to in the June or July number, and feel obliged to you for directing our attention to it.

BLIND STAGGERS IN HORSES.—E. C. C., Tuscaloosa, Ala.—Can any of our readers furnish us a specific? If so, we will gladly publish it.

HOLLOW HORN.—"Homespun"—Your article will appear in our next—also an answer to your enquiries.

STODDARD'S SHINGLE MACHINE.—A. B. E., Washington, Texas.—Address A. S. & A. D. HILL, of this city, respecting the right in Louisiana and Texas.

✍ CORRESPONDENTS writing to us on their own business, will bear in mind that we have to pre-pay the letters replying to them. As the expense will be very heavy, if we have to pay the postage on all such letters, we must ask our correspondents to envelope us in every instance a stamp, if an answer is expected.

NEW POSTAGE LAW.—From the first of last month (April) no letter will be sent through the Post Office unless the postage is pre paid. Postmasters are directed to retain all letters not pre-paid, and post a list of the same in the Post Office, and if not paid within one month, they will be sent on to the Dead Letter office. Letter writers should notice this regulation.

THE SEASON,

Thus far, has been most unfavorable for all agricultural and horticultural operations. From the 27th to 31st of March, we were visited with an almost unprecedented "spell" of cold weather—the mercury, on one or two occasions, in this vicinity, dropping down to 18° and 20° above zero, accompanied with a fierce, bitter and blighting wind from the northwest. The peach, nectarine and plum trees were either in full bloom, or had formed fruit half the size of a pea. All in the latter stage, were entirely destroyed; but a very few of the undeveloped buds escaped. Strawberries were blooming and in fruit, and the first crop of these was utterly cut off; as were most of the earliest Apples and Pears. All Corn, above the ground, was, of course, cut down; and in many cases, the sprouts under the surface, were killed, with the grain itself. Wheat, winter Oats and other small grains, were very severely injured; Sweet Potatoes, planted in the open ground, rotted badly; and all tender garden vegetables were involved in the common ruin. So far as we can learn from our exchanges, and letters of friends and correspondents in different parts of the South, this general

destruction has spread far and wide; and we only hear of a few sections in this and the adjoining States, where even half a crop of fruit may be expected.

Since the frost (now nearly a month) we have had but one good rain; and, at the present writing (April 19th) the growing crops are wilted, drooping, almost dying, from the long drouth. The mercury in our thermometer now (3 P. M.) stands at 92° in the shade, and the slight breeze that is stirring is forcibly suggestive of the simoon, or the fiery breath of a furnace! We are no "croakers" or alarmists: but we hazard little in predicting "short crops," (so far as our immediate section is concerned) unless the weather soon takes a more favorable turn.

ARTHUR'S SELF-SEALING, AIR-TIGHT PRESERVING CANS.

We are indebted to the proprietors for several samples of this newly-invented patent Can, for the preservation of fresh Fruits, Vegetables, Preserves, &c., &c. It is altogether the most convenient and economical article of the kind that we have yet seen, and bids fair to be of great value and utility. We intend to give it a fair trial, the present season, and shall report upon its merits. The Cans, of assorted sizes, from a pint to a gallon, may be ordered through D. B. PLUMB & Co., of this city, or from the proprietors, ARTHUR, BURNHAM & Co., Philadelphia, Pa. We will furnish a more particular description of these cans, hereafter.

NEW PUBLICATIONS.

THE ARATOR, is the title of a new agricultural monthly, of 32 pages, the first number of which was issued last month at Raleigh, North Carolina, by THOS. J. LEMAY, Esq., Editor and Proprietor. It presents evidences of industry and zeal, and will, doubtless be an efficient co-worker of the *Carolina Cultivator*, which we noticed last month. The nap of "Rip Van Winkle" may be considered fairly broken, if these two journals receive the support they deserve from the farmers and planters of North Carolina.

THE HORTICULTURIST, for April, is an excellent number. The following are the leading articles:—"Is Pear Culture Profitable?" by the EDITOR; "Biographical sketch of THOMAS HOGG, Sen.;" "Osband's Summer Pear;" "Jenny Lind Seedling Strawberry;" "Evergreen Shrubs;" "Green Houses and their Management;" "Curculio Remedies;" "Village Cemeteries;" "An Italian Cottage;" *Editors Table*, &c., &c. Published monthly at Rochester, N. Y., by JAMES VICK, Jr. Plain edition, \$2 per year; colored, \$5. P. BARRY, Editor.

THE RELATION OF CHEMISTRY TO AGRICULTURE, and the Agricultural Experiments of Mr. J. B. LAWES. By JUSTUS V. LIEBIG. Translated by SAMUEL W. JOHNSON, at the author's request. Albany, N. Y.: LUTHER TUCKER, Publisher. 1855.

This excellent little treatise will be welcomed as an important addition to our rural literature. It may be regarded as a hand-book of Agricultural Chemistry; and as it corrects many errors into which careless experimentalists have fallen, it will be found worthy of general attention.

It may be obtained per mail for 25 cents, by addressing LUTHER TUCKER, Albany, N. Y.

THE NEW YORK QUARTERLY. Devoted to Science, Philosophy, Literature, and the Interests of our United Country. Vol. 4, No. 1. April, 1855. New York: JAMES G. REED, Publisher, 348 Broadway.

The present telegraphic and daily-newspaper age is

rather too "fast" for the ponderous and stately "*Quarterly*;" and yet we confess to a great liking for the "sober second thought," the chastened fancy and the thorough scholarship, which characterizes many of these journals. "The New York Quarterly" claims to be entirely free from "sectional and sectarian prejudices;" and as it is a work of high literary merit, we can safely commend it to the favorable notice of our readers. The leading papers of the present number are "Post Office Improvements;" "Taste in New York;" "Washington Irving—his Home and his Works;" "Lunar Influences;" "The Modern Architecture of New York;" "The Hawaiian or Sandwich Islands;" "Contemporaneous Literature, &c., &c. Terms—\$3 per annum. Address JAMES G. REED, as above.

LETTER FROM DR. KERSH—CORRECTION.

EDITORS SOUTHERN CULTIVATOR.—Oblige me by correcting one error in printing one word in my letter to you in the last (April) number of the *Cultivator*. I wrote thus: "Lime never can be *bought*," in our climate, to decompose vegetable matter;" the word I wrote *bought* is printed "brought," and it alters or expresses a sentiment that I feel ashamed to go before the eye of an intelligent community. However strong I might advocate any scientific theory of the *modus operandi* of mineral manure—a very great and practical subject, and one, the *modus operandi* of which must be correctly understood, if agriculture wishes to rise high in the successful application of those fundamental fertilizers. I never like to express anything but the true inductions of science.

You will find in the *Fairfield Herald*, another letter published; addressed, through that paper, to Dr. LEE, by myself. Read it, and if worth a place, I will be happy to see it, also, in the *Cultivator*. It is a second letter rendering more explicit some points I touched on in my first letter to Dr. LEE.

Very respectfully,
WM. D. KERSH, M.D.

Winnsboro, S. C., April, 1855.

TO DESTROY RED ANTS.

We find the following in a late number of the *Dollar Newspaper*. The remedy seems feasible, and should be tested:

Messrs. Editors—Would you give place, in your valuable paper, to a sufferer from a small, but troublesome animal? I mean the little red ant. The neighborhood in which I reside is infested with them to such an extent, that nothing is safe from their depredations. We are obliged to keep some of our provisions surrounded with water, and some on hanging shelves, with the ropes tarred, and I have tried all the advertised remedies, but without any sensible effect. Perhaps some of your numerous readers who are possessed of a knowledge of chemistry, could mention some article which would be efficient in bringing about their destruction, and thereby benefiting not only my neighborhood, but many others, who may be sufferers from these troublesome little "varmints." By giving this an insertion you will much oblige

ANTI-ANT.

A correspondent sends us the following in answer:—We give you a sure remedy—procure a large sponge, wash it well; press it very dry; by so doing it will leave the small cells open—lay it on the shelf where they are most troublesome, sprinkle some fine, white sugar on the sponge—(lightly over it); two or three times a day, take a bucket of hot water to where the sponge is, carefully drop the sponge in the scalding water, and you will slay them by the thousands, and soon rid the house of those troublesome insects.

Yours truly, J. J.

P. S.—When you squeeze the sponge, you will be astonished at the number that had gone in the cells.

MEXICAN GUANO.

We are requested to write an article descriptive of the properties and value of Mexican guano, as compared with Peruvian guano, which is sold at much higher price. The latter is better known to the public, having been longer used in this country and in England, and found to yield large and profitable returns in favorable years. As an article of commerce, Mexican guano is only beginning to establish a reputation; and purchasers have to rely mainly on its analysis by reputable chemists to warrant them in using it to any extent as a fertilizer. Judging of its value from its alleged composition, it is worth nearly, perhaps quite, as much per ton as ground bones, the phosphate of lime constituting more than half its weight. It is four or five times richer in phosphoric acid than Peruvian guano; while it contains not more than one fourth or fifth as much ammonia. It is the absence, or comparative absence, of this volatile alkali, (which is worth from ten to twelve dollars per 100 lbs. for agricultural purposes,) that makes Mexican so much cheaper than Peruvian guano. The latter is formed in a region where rains are almost unknown; so that the excrements of birds, seals and reptiles, which have accumulated in vast quantities in the present and past ages, on a few islands lying near the coast of Peru, have never been washed or leached, to the serious injury of the manure. That which exists on islands in the Gulf of Mexico, or on the main land near it has not been exempt from this deteriorating process; so that much of the soluble elements of fertility, (salts of ammonia, potash, soda and magnesia) have been washed away. Bones, which will lie for years exposed to the weather on our fields without dissolving, are the grand staple of Mexican guano; and it ought to be bought in Charleston and Savannah at about \$25 a ton to be profitable to the planter or farmer. Although its durability is an advantage in one view of the question, yet in another view, it is a disadvantage, for it proves the manure to be very sparingly soluble in the soil and equally unavailable as food for growing and needy crops. Salts of ammonia last only for one or two crops; but they tell powerful on such as really imbibe the fertilizer. If a concentrated manure lasts five or ten years in the soil, no one crop can obtain more than a mere taste of it.

Both the art and science of feeding agricultural plants are little studied, and less understood. If we were able to purchase Peruvian and Mexican guano at fair prices, we should prefer to mix them in equal parts for a common manure, to applying either separate; and simply because the first named is defective in phosphates, and the last named in ammonia. For turnips and grass, the Mexican would doubtless give a better return on the investment than the Peruvian guano; but we doubt whether on corn, wheat and cotton any gain would be realized by giving a preference to bone-earth over ammonia. The true merits of both kinds of commercial manure can only be decided at the South, and for the South, by careful experiments made by competent persons, for the express purpose of learning the value and powers of Mexican guano and Peruvian guano. Sooner or later, all sensible cultivators will see the importance of having experimental farms to determine the practical value of every constituent used by man and nature to build up those living structures which form, in some way, both the food and clothing of all civilized nations. Knowledge is what we all lack; and alas, how little are we all doing to increase our present stock into rural economy?

As a commercial fertilizer that has been washed by rains is worth only half as much per 100 lbs. as one that has escaped such washing, does not this fact strikingly illustrate the folly of allowing our stable and yard manure to be exposed to the leaching influence of many rains before it is applied to the soil? On a fair average such

manure is worth something less than half price. The same principle that makes a piece of meat rot sooner than a piece of wood, induces the nitrogenous parts of the droppings of all animals first to escape, unless such droppings are placed under peculiarly favorable circumstances. It is mainly this liability to loss that renders ammonia worth seven times more per pound than phosphate of lime, or bone-earth. L.

GRASS CULTURE AT THE SOUTH.

JUDGING from the letters which we have received on the subject, and the earnestness with which it is discussed in agricultural prints, Grass Culture commands no inconsiderable attention even in the best planting districts of the South. This is an encouraging indication, for it shows that sensible men begin to appreciate the importance of diversifying the agricultural industry of the planting States. They see the value of good stock, and the necessity of an abundance of grass or other forage for their improvement, and highest profit. An esteemed correspondent writing from Pickinsville, Ala., says: "I am just from Tennessee, and have brought some Blue grass Herds and Orchard grass seed, but have no experience in raising grass, and desire advice from some one familiar with the business, as to soil, and whether the grasses named will do well this far South?"

If the soil in Pickins county is naturally fertile and not deficient in lime, Blue and Herds grass may flourish there, having failed in our experiment with Orchard grass, and never having seen it succeed in the hands of others at the South, the balance of evidence known to the writer is against it. With better treatment in other districts it may have given satisfactory results. We have seen capital hay made of Southern grown Herd's grass; and on rich bottoms and intervals in Upper Georgia, nothing appears easier than to grow large crops of it for hay or grazing. Blue grass is also grown, but mainly for pasturage. Like all English, and most indigenous plants of this numerous family (one distinguished European botanist has enumerated nearly forty thousand species) Blue grass requires a rich calcareous soil to develop its highest capabilities. So far as we are able to judge of the land in the vicinity of Athens, Ga., it is too poor for the cheap production of the best forage plants. It will probably give a better return in Bermuda grass for the keeping of stock, if not for making hay to be pressed into bales, and sold in competition with Northern hay in all Southern markets. To drive imported hay out of the South by the production of a cheaper and better article at home, is an object not unworthy of Southern agriculture. A little well directed enterprise will soon attain this end, and raise a surplus for export to the West India Islands. The farmers of Ohio send large quantities of hay to New Orleans, Texas, Cuba and other distant parts. If the writer could obtain lime at a moderate price, he would have confidence in an attempt to transform an old field of poor upland into a valuable and profitable meadow; but without lime, and with guano at \$60 a ton, nothing but a fair setting with Bermuda grass appears worthy of trial. To strengthen the natural resources of poor land, especially the red clay of Central Georgia, we know nothing better for the cost than deep fall plowing, that frost and atmospheric influences may develop the latent powers of the subsoil. A crop of peas and a dose of Mexican guano still farther to improve the land, will prepare it for any grass seed that one may prefer. The soil should be as thoroughly prepared for the seed as it ever is for wheat, or cotton. Cultivated in this way, grass will yield crops worth having, but not otherwise, on poor land. Mexican guano can be bought for about half the cost of Peruvian, and usually contains more than twice as much of phosphates, although much less ammonia. We prefer the Mexican for grass,

and the Peruvian for wheat. We shall test both on corn this year, in a comparative trial of cost and yield. Corn is a cereal grass hard to beat, where the land is rich enough for it to do its best. L.

LEGISLATIVE AID TO AGRICULTURE.

We commend the following to the earnest attention of the people of Georgia and her sister States of the South. Let not the example of Michigan be lost upon them, when they come to express their sentiments through the ballot-box. Our law making servants should be fully apprized of the fact that in no other way can they so well advance the interests of the country as in an enlightened and liberal support of the best system of agriculture. We should begin the work of reform at once, and hope our next Legislature will appropriate at least \$20,000 to start the good work:

MICHIGAN STATE AGRICULTURAL SCHOOL.—We are pleased to learn that this young and enterprising State has, at the late session of its Legislature, passed an act establishing a State Agricultural School.

The provisions of the Michigan law authorize the Executive Committee of the State Agricultural Society to select a farm of not less than 500 acres, nor more than 1000 acres, within ten miles of Lansing, the capital of the State, subject to the approval of the Board of Education. Twenty-two sections of salt spring lands, or the moneys arising from the sale, are appropriated for the pay of the purchase, the erections, furniture, library, &c. The School is to be under the direction of the State Board of Education. From \$5,000 to \$6,000 per year appropriated to pay the teachers. Tuition to be forever free to the pupils from the State.

AN AWFUL CONDITION!

A SUBSCRIBER in South Western Georgia writes us as follows. We need not say that we flew to his relief at once, by dispatching him a package of *Cultivators*. Should any other agricultural gentlemen find themselves in a similar "fix," it will afford us pleasure to apply the same remedy. But to the extract:

EDITORS SOUTHERN CULTIVATOR.—*Gentlemen*—I am behind in planting. Everything in a state of "wild confusion." Horses getting poor and ugly, cows dying with the hollow horn, hogs staggering out, sheep rotting away, and all, all for the want of the *Cultivator*. I cannot do without it, and did not know that you had stopped it till I found the "dollar" still in my pocket. You will, therefore, please make the exchange again and take the dollar and send the paper. Respectfully yours, &c.,

H. F. W.

Thomasville, Ga., March, 1855.

DEVONS "AROUND CAPE HORN."

The first attempt to import pure breed Devon stock from the United States to the Sandwich Islands, has resulted in the most perfect success. By the ship *Vancouver*, from Boston, a fine cow, called "Edith," not yet three years old, and a bull, ten months old, named "Young Herod," have just come safe to land. A bull calf was added to the list on the 6th of January, which it is presumed will receive the name of "Vancouver," from the ship on board of which it was calved on the passage out. The blood of these animals is of the purest kind, and their pedigree is on record for the assurance of those who have

an interest in them. They were imported by the Royal Hawaiian Agricultural Society, which owns one-half interest in them, J. MONTGOMERY, who owns one-quarter, and Dr. R. W. WOOD, who owns the remaining quarter. "Edith" cost, in Westchester county, New York, \$350, and "Young Herod" \$150. The expenses of their journey to Boston, hay, grain, and water for the voyage, and house for their accommodation, &c., bring up the entire cost to about \$765, landed at Honolulu. Besides this, there was much gratuitous labor bestowed upon them, in selecting, &c., and through the liberality of the owners of the ship, no freight has been charged.

COST OF FENCING.

Mr. Editor.—The appearance in your issue of the 17th ult., of an article on the "cost of fencing plantations," was at this particular time most *apropos*. Not a reader of your journal in the District, nay, not even in the State, but that feels most sensibly the truths contained in that article. The writer, (whom we suppose to be one of the editors of the *Southern Cultivator* from his signature,) fully understands the immense expense, but does not know the prime cost of enclosing a field for cultivation. Ask the farmers and planters of our District what it costs to keep their several plantations well fenced against the intrusion of their own and other owners' stock, most of which are turned out to hunt their food or die of starvation, and we venture, not one of them could tell within half what it costs. Southern planters generally maul their rails and build fences at a time when many of them suppose nothing else could be done. The cotton crop being picked and packed, and the corn housed, a "new ground" must be cleared from ancestral custom; in clearing this the rails are made, and the fences built with no loss but time, and time to such men is of no value. Were this same tract of woodland allowed to remain, and its surface well scraped and cleared of its trash to make manure, thousands of impoverished acres might be reclaimed, and our beautiful forests left standing as pasture ground for the owners, stock.

As fences are built during the winter season, when planters do not think it profitable to keep their plows, and those too of the subsoil kind, running, and many of them are altogether ignorant of the method and value of making manure—clearing lands and mauling rails is a necessary alternative to employ the hands on a plantation: hence its cost is regarded inconsiderable. But when after such a dry winter as we have had, there happens so universal and destructive a fire as has lately visited our State and almost the entire South, and this, too, in the very beginning of the planting season, each land owner will appreciate fully the following summary which we suggest as the prime cost of fencing a field for cultivation.

We will select a square field of 36 acres, 6 acres on either side. The length of a fence to enclose such a field would be 5040 feet, or nearly one mile. Now, a rail fence seven rails high (which is too low to be certain protection) will average about one rail to the foot, hence it will require 5040 rails to build the fence. A hand that will maul 125 rails one day with another is worth 75 cents a day, finding himself. It will require him 40 days work to maul the rails, or an expense of \$30. The rails, if worth anything, should sell for at least \$2.50 per hundred, or \$126, for the 5040. Hauling the rails and building the fence, we suppose, would be worth \$20. Hence the entire cost of cutting the timber mauling the rails and finishing the fence would be \$176. We consider this estimate a fair one, and believe the fence the most expensive that can be built.

Mr. Editor, a system of fence is being adopted about your town, which to us appears much neater, far more durable, and without less expensive. We allude to the ditch

and bank, post and board fence. Let us see if we can calculate the prime cost of enclosing the same 36 acre field after this manner, as we have done for the common worm fence.

First, then, a ditch 3 1-2 feet broad, 2 1-2 feet deep and 5040 feet long is to be dug. We will begin with five negro men. Their task daily will be 15 rods, they will finish it then, in 20 days. Their daily cost will be \$4. Hence the ditch will cost \$80. The posts can be set in the ground 7 feet apart, hence it will require 720 posts. They can be mauled out in 4 days by any able hand, hence the mauling expense will be \$3. The cost per hundred just half that of the rails, as they need to be but four and a half feet long. The 720 posts then will be worth \$9. Hauling the same, \$3. Four hands can dig the holes and set up, easily, 50 posts a day. Hence it would require 15 days at \$3 per day, or \$45 to set the posts. The plank, 14 or 21 feet long, 6 inches broad, would cost \$50. The nails, \$5, and the plank could be nailed on in 4 days by 2 hands, 75 cents each per day, or \$6. By adding up the above different costs, you will find the cost of such a fence to be \$201.

Now, as to their durability; if the common fence lasts ten years, the post and board fence is good for twenty, hence the latter would be the cheaper fence if it cost double the former; inasmuch as nothing would be expended in repairs, or re-building for double the length of time. If the ditch bank be set out with the Cherokee rose, or Scotch bramble, or some other prickly evergreen, the ditch will be impassible for years after the decay of the fence.

In building the post and board fence, it is said to be advisable to char the ends of the posts sunk in the ground. Of this, we cannot speak with certainty, further than that we have always observed among old rails, if any of them had a burnt end, it was surely more sound and solid than the end unburnt. We have seen it also recommended to invert the posts, so that in the fence they would stand up side down to what they were in the tree. Of this, also, we are unable to speak knowingly, but have sufficient reasons to believe it to be the proper method of planting posts.

Mr. Editor, for one, we are opposed to either of the above fences around our cultivated lands, and firmly believe it should be required of every owner of stock to pasture them upon his enclosed, while his cultivated lands were left entirely open. To enclose hogs, some sort of close fence would be required, but let each hog-raiser select that for himself. To enclose cattle or horses, nothing is required more than a row of posts from 12 to 15 feet apart, with 2 or 3 courses of strong wire running through them. The worm fence, as well as the ditch and bank fence, are furthermore extensive, because they occupy about one acre of every forty which they enclose. We trust our Legislature will, before they build many more State Houses, turn their attention to this necessary want of the larger portion of the State.

Yours respectfully, MONTICELLO.

P. S.—We selected the 36 acre field merely as an average in size among our fields, believing that where there are 10 larger, there are 15 smaller, and hence more expensive to enclose.

M.

[Winchester Herald.]

THE modest maiden, the prudent wife or the careful matron, are much more serviceable in life than petticoated philosophers, blustering heroines, or virago queens. She who makes her husband happy, and reclaims him from vice, is a much greater character than ladies described in romance, whose whole occupation is to murder mankind with shafts from the quiver of their eyes.—*Goldsmith.*

MINERALS OF ALABAMA.

THE following list (from an exchange paper) shows the mineral wealth of our sister State in a most favorable light. Georgia, Tennessee and many other States are equally rich in valuable marbles, ores, &c., but thus far little has been done to make them practically available:

Mr. Editor:—Dear Sir—I have observed that you occasionally publish lists of the minerals of the State, which leads me to suppose that a revised list may be acceptable to you, and interesting to your readers. The following may be considered as correct up to this date, at least, so far as the survey has proceeded:

<i>Actinolite,</i>	Tallapoosa, Chambers,
<i>Albite,</i>	Randolph,
<i>Alum slate,</i>	Blount, etc,
<i>Asbestos,</i>	Chambers,
<i>Beryl,</i>	Randolph,
<i>Coal, Bituminous,</i>	Tuscaloosa, Walker, etc,
<i>Cannel,</i>	Walker,
<i>Brown lignite</i>	Clarke, Greene, etc,
<i>Dolomite,</i>	Benton, Jefferson, etc,
<i>Fluor Spar,</i>	Benton,
<i>Garnets,</i>	Randolph,
<i>Graphite,</i>	Tallapoosa, Benton, etc,
<i>Gold, native,</i>	Randolph, Tallapoosa,
<i>Gypsum,</i>	Coosa, Talladega,
<i>Heavy Spar,</i>	Limestone,
<i>Cyanite,</i>	Benton, Bibb, Jefferson,
<i>Hornblende,</i>	Tallapoosa, Randolph,
<i>Limestone, Marble,</i>	Chambers, Randolph, etc,
<i>Magnesia, sulphate,</i>	Talladega, Bibb, etc,
<i>Mica,</i>	Tuscaloosa, DeKalb,
<i>Quartz crystal,</i>	Chambers, Randolph, etc,
<i>Tourmaline,</i>	Randolph, etc,
<i>Serpentine,</i>	Chambers, Tallapoosa,
<i>Soapstone,</i>	Tallapoosa,
<i>Strontianite,</i>	Blount, etc,
<i>Talc,</i>	Tallapoosa.

ORES.

<i>Copper, Pyrites,</i>	Randolph, Talladega,
<i>Carbonate,</i>	St. Clair, etc,
<i>Cobalt,</i>	Randolph,
<i>Iron, Pyrites,</i>	Tallapoosa, etc,
<i>Arcenical,</i>	Talladega,
<i>Ore, Magnetic,</i>	Chambers,
<i>Specular,</i>	Jefferson, Cherokee,
<i>Brown hematite,</i>	Shelby, Jefferson, etc,
<i>Carbonate,</i>	Tuscaloosa, Walker,
<i>Bog,</i>	Chambers, etc,
<i>Manganese, black oxide</i>	Benton, Randolph, etc,
<i>Lead, Sulphuret,</i>	Benton.
<i>Carbonate,</i>	
<i>Zinc, Blende,</i>	

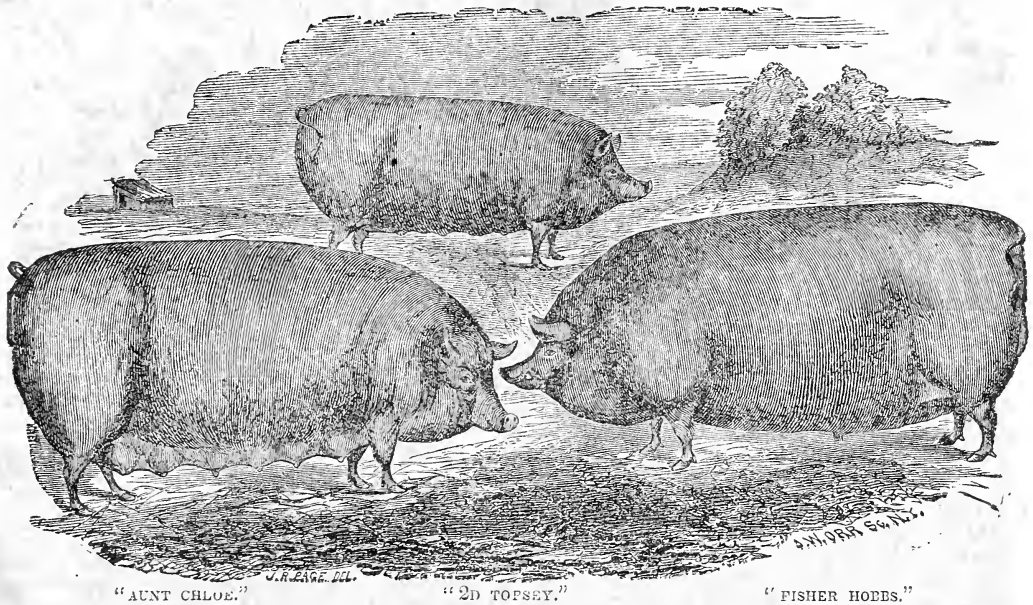
It will be perceived that we have now all the workable ores of iron; the extent of some of the beds is not yet determined. All the localities where these minerals occur, are not given, nor could I notice all, without extending this communication to an unreasonable length, the building materials, and other rocks and minerals of the State.

Very respectfully,

M. TOUMEY.

University of Alabama, Feb., 1855.

“PLANT a tree—train a vine—deposit a flower seed and nurture its blossom—paint the fence—slick up the yard—fix the sidewalk—erect a tool-house—prune the orchard—make a hen-coop—in short, give heed to neatness and to the little things that constitute the grand aggregate of health and public beauty.”



ESSEX SWINE,

PROPERTY OF L. G. MORRIS, OF MOUNT FORDHAM, N. Y.

"AUNT CHLOE" and "FISHER HOBBS" were winners of the 1st prize in their class at the New York State Show held at Saratoga in 1853.

LEAD TUBES AND CEMENT TUBES.

LEAD is very extensively used for aqueducts, and yet many who wish to have water conveyed to their dwellings and out-buildings, are afraid to use it. Its durability—the ease with which it is bent into any direction to accommodate curvatures, render it valuable for this purpose, and perhaps, in a mechanical point of view, nothings better could be obtained. The great drawback to its use is the danger which accompanies it, of its becoming corroded or dissolved by the water, and thus poisoning the water conveyed in it, and rendering it unfit for use. Although pure water would not act on lead, and render it poisonous, (for all the solutions of lead are more or less poisonous), yet every fountain is liable to become impure, to have some kind of saline matters incorporated with it, and thereby give it the power of acting on the lead, and causing the water to become deleterious to health. For this reason, other material has been sought for from which to manufacture tubes, or piping as it is sometimes called, for this purpose.

Gutta Percha has been adopted in many instances for this purpose, and found to answer very well, but its durability is yet a matter of experiment. Hydraulic cement has been tried, and although not so easily manufactured and bent as lead, can nevertheless be made cheaper, will be very durable, and is not poisonous in any way. Various plans and methods have been adopted and recommended for the purpose of making piping of this kind.

The most recent plan that has come to our knowledge, is a patent taken out by Messrs. T. B. & W. F. Poague, of Fancy Hill, near Rockbridge, Va. The *Farmer's Journal* has some remarks upon this invention, by which piping is made of Hydraulic cement, and states that this pipe has been found by trial in that neighborhood to be very superior. The writer says that after the ditch

is dug, the piping is laid down with great rapidity, as it is made from the mortar.

Where the perpendicular pressure is not great, it can be used at once, and in all cases, after hardening a few weeks. The piping, of course, gets harder and stronger with age, until it becomes as hard as rock itself.

One bushel of cement will make six yards of piping, of one and a half inch bore.

The advantages of this piping are enumerated as follows :

1. Its superior durability, lasting forever, while others rustor wear out in a few years.
2. In conveying the water perfectly pure, without poisoning it like lead, or discoloring it like iron.
3. Its greater cheapness, ordinary piping not costing half as much as that of iron, or lead. It is even cheaper than wooden pipes.

We think that the above advantages are very important ones, and we should like to see a trial of the invention made in Maine.—*Maine Farmer.*

YELLOW FLINT CORN.—Many expedients have been resorted to by our farmers to prevent the injury or destruction of their corn during the winter and spring by weevils; all of which, so far as we can learn, have failed. It is probably impossible to protect the common gourd seed, and other soft kinds of corn usually planted in this country from the depredations of this destructive insect. Then why not plant a kind that it is impossible for them to injure? The yellow flint, of ten or twelve rows, makes much better bread, is heavier, comes to maturity earlier, yields as much, is in every respect as profitable to cultivate as common kinds, and above all, it is proof against the attacks of weevils. It has been thoroughly tested in this county, and the results have been invariably as above stated. Every farmer should try it for himself.—*Texian Advocate.*

We find the following in a late number of our spicily contemporary, the *Edgefield* (S C) *Advertiser*, and would commend the example of Col. FRAZIER to other masters and employers:

OVERSEER, READ THIS!

It will be remembered by the Overseers of Edgefield, that Col. M. Frazier has offered a fine watch, as a reward to the Overseer (working not less than ten hands) who will report the best managed farm, largest crop per land of Cotton, Corn, Wheat and Pork, for the present year.

Col. Frazier has just returned from the North and laid before us this elegant prize. It is a fine English Lever Watch, encased in a heavy silver Hunting Case, upon the back of which is beautifully engraved, "Presented by M. Frazier, Edgefield, S C, as a reward of merit."

We assure those who are contestants for this valuable prize, that it is eminently worthy of the donor, and calculated to call forth all the energy and skill of which the candidates may be possessed. Remember then, that the prize is now fairly upon the stake, and that the "longest pole knocks down the persimon." Whip! Whip! Hurrah!

DEVONSHIRE MODE OF MAKING BUTTER.

A Lady correspondent of the *Boston Cultivator*, recommends the method of making butter practised in Devonshire and some other northern counties of England, with what is called *clotted cream*. She says it is adapted for all seasons of the year, and assures those who will try it, "the butter shall be superior in quality and greater in quantity than obtained by any other process, and what is equal in importance, bring a higher price in the market; of a richer color and finer flavor; not so hard in winter or soft in summer. This butter must not be washed or covered with wet cloths, as that would destroy both the color and the fine fragrance, arising from the article when made according to the directions. It needs not to be salted more than for fresh summer butter at any season of the year, to cause it to keep any length of time, *it having been cooked.*"

We doubt whether this lady has had much experience in this method of making butter, especially "at all seasons," and we do not suppose that all who may try it will fully agree with her in regard to the quality of the article when made, though some persons may fancy it. This method has long been well known in England, and several times published in this country, without finding general favor. The following directions from an English work, says the *Olio Cultivator*, are more reliable than those of the Boston paper:

"The milk while warm from the cow is strained into either shallow brass pans, well tinued, or earthen ones, holding from two to five gallons, in which there should be a small quantity of cold water. This is thought to prevent the milk from burning, and to cause the cream to be more completely separated and thrown to the top.

"The morning meal of milk stands till about the middle of the day; the evening meal until the next morning. The pans are now steadily carried to, and placed over a clear, slow fire of charcoal, or over a stove. The heat should be so managed as not to suffer the milk to boil, or, as they provincially term it 'to heave;' as that would injure the cream. The criterion of its being sufficiently scalded is a very nice point; the earthen pan, having its bottom much smoother than the top allows this point to be more easily ascertained; because when the milk is sufficiently scalded, the pan throws up the form of its bottom on the surface of the cream.

"The brass pan, if almost as big at the bottom as at the top, gives no criterion to judge by, but the appearance

and texture of the surface of the cream, the wrinkles upon which become smaller and the texture somewhat leathery. In summer, it must be observed, the process of scalding ought to be quicker than in the winter, as in very hot weather, if the milk should be kept over too slow a fire, it would be apt to run or curdle.

"This process being finished, the pans are returned to the dairy; and should it be the summer season, they are placed in the coolest situation; but should it be the winter season, the heat should rather be retained, by putting a slight covering over the pans, as cooling too suddenly causes the cream to be thin, and consequently yield less butter; the mode of making which is this: The cream should, in hot weather, be made into butter the next day; but in winter it is thought better to let the cream remain one day longer on the milk. The cream, being collected from the pans, is put into wooden bowls, which should be first rinsed with scalding, then with cold water. It is now briskly stirred round one way, with a nicely cleaned hand which must also have been washed in hot and then in cold water, for these alternate warm and cold ablutions of bowl and hand are not only for the sake of cleanliness, but to prevent the butter from sticking to either.

"The cream being thus agitated, quickly assumes the consistence of butter, the milky part now readily separates, and being poured off, the butter is washed and pressed in several cold waters; a little salt is added to season it; and then it is well beaten on a wooden trencher until the milky and watery parts are separated, when it is finally formed into prints for the market."

HOLLOW HORN—STAGGERS IN SHEEP.

EDITORS SOUTHERN CULTIVATOR—I see in the fourth number of the *Southern Cultivator*, page 127, an inquiry from "A SUBSCRIBER" for the cause and remedy of the "Hollow Horn" in Cattle; he says, "I know some will say it is the hollow belly, or want of attention." He further says, "I always keep my oxen in good order, well fed and not abused." This last I cannot deny, but I do say to "A SUBSCRIBER," that it is the hollow belly, and nothing else. A fat ox or cow never has the "Hollow Horn," the disease is somewhere else; I think in the brain. Some two years ago, one of my neighbors had a very fine fat cow down on the lift. He with others thought it the "Hollow Horn." He bored a gimlet hole on the under side of each horn, about middle way, and put in some salt and water, (which is the only remedy I know or ever heard of) In a few minutes she got up, walked off some twenty yards and fell dead. He cut her head open (he says) and examined her brain and found very offensive matter all around the brains, and this I verily believe was the disease of "A SUBSCRIBER's" oxen, if they were in good order, which he says they were.

There is another disease that cattle are subject to, both fat and poor ones; that is the "Hollow Tail," and will kill if not attended to immediately. To find out if a cow has the "Hollow Tail," if the end of the tail feels soft and cold, then she has got what is called the "Hollow Tail." For a cure, cut it off with a sharp knife or axe, about ten or twelve inches from the lower end.

I also see in the same number, page 133, "D. E. B." wishes a remedy for staggers in sheep. This is a disease in sheep that is very easily cured if attended to in time. Let "D. E. B.," as soon as he finds a sheep has the staggers, bleed it by cutting some of its tail off and some off of both ears; put it in a close pen and feed it well with fodder, cotton seed, a little corn and some salt; let them be sheltered if bad weather, and they will soon get as well as ever.

W. R. J.

Jefferson Co., Ga., 1855.

PROF. LEE.

For the last few weeks, we have listened with much interest to Dr. Lee's Lectures on the Science of Agriculture. His Lectures prove him to be well versed in Botany, Geology and Chemistry—the three sciences most intimately connected with Agriculture—an accurate knowledge of which is indispensable to success in farming on scientific principles.

Dr. Lee has consented for his introductory lecture to be published in the agricultural papers, so that the public may have an idea of the objects of the Professorship. In this Lecture will be found a statement of facts, which are to be thoroughly examined, enlarged and commented upon, in future lectures. The State of Mississippi is endeavoring to establish an Agricultural Professorship in its University. We hope it will; and that Agriculture, the parent and most useful of all occupations, under the dignified title of a science, will be studied with more interest and attention.—*Georgia University Magazine.*

STOCKING KNITTING MACHINE.

A Stocking Knitting Machine is among the latest novelties in New York. It was patented in 1851, but with the exception of a few in Connecticut, has not been practically tested. The New York *Mirror* says:

A girl ten years old can knit half a dozen pairs of stockings in a day, working the machine by hand or foot. In a factory, with motive power, one person can manage a dozen machines. The stocking is entirely made by the machine, from top to toe, and no nimble fingers of industrious elderly maiden, sitting by the hearth corner, could "widen," or "narrow," or "heel," or "toe" more perfectly. The invention is in the hands of a stock company, who are about to apply it in a large factory in this city, and who offer for sale rights to use the machines.

INTELLECTUAL PLEASURE.—The culture of the mind increases indefinitely the *sources of its enjoyment*. It elevates their character; and not less does it increase their amount. There is pleasure in knowledge itself, in being able to traverse fields of thought, converse with science, and read the wonders which are written for the instructed eye on all works of the Creator. There is a pleasure in books, in communion with gifted minds of every age in the graceful walks of literature. There is a pleasure in the indulgence of cultivated taste, in the exercise of trained and disciplined powers of reasoning. It is, indeed, impossible for the ignorant to appreciate enjoyments like these, but they are, nevertheless, real. And they have, too, this particular merit, that their very enjoyment conduces to the improvement of the mind. Sensual pleasure tends to debasement. It blunts the nicer sensibilities of the soul; it vitiates the tastes, degrades the desires, and prostrates to the level of the animal. But the pleasures of the soul while they are enjoyed benefit in turn the soul itself; elevating and refining it, and making it more capable to enjoy, and more keen to relish the pure, the beautiful and the good.

ADVICE TO THE GIRLS.—Dr. Beeswax, in his admirable "Essay on Domestic Economy," talks to young ladies after this fashion: "Girls, do you want to get married—and do you want good husbands? If so, cease to act like fools. Don't take a pride in saying you never did house-work—never cooked a pair of chickens—never made a bed, and so on. Don't turn up your pretty noses at honest industry—never tell your friends that you are not obliged to work. When you go shopping never take your mother with you to carry the bundle. Don't be afraid to be seen in the kitchen cooking steak."

NECESSITY OF MIXED FOOD.—If I only bend my arm or move my finger, there is a certain portion of the tissues destroyed which must be supplied by my food; the more work that a man performs the more of those nitrogenous substances he requires. So far as supplying the waste of the tissues, it is a matter of indifference whether we give an animal food containing gluten or albumen; but it exercises a considerable influence on the character of the animal. Take, for example, a hunt, at which we have an omnivorous animal, man, riding on a granivorous animal, a horse, accompanied by a carnivorous animal, a dog, following an herbivorous animal, a hare. Even the character of nations is very materially affected indeed by their food. The other class of food serves a very important, but totally different purpose—namely, that of supplying animal heat. The temperature of our bodies is, in temperate climates at least, higher than the surrounding air. Now, in order to keep up this temperature, a combustion goes on similar to that of an ordinary fire. The same products—carbonic acid, water and ammonia—are evolved from the mouth of the furnace of the body and the mouth of a common chimney. In cold weather, a certain portion of heat is gradually abstracted from our body, which must be supplied by the combustion of our food or of the matter of our bodies; the colder the climate, therefore, the more heat-giving materials must be supplied in the food.—*Professor Lyon Planifair*

OUT-DOOR EXERCISE.—It is owing mainly, to their delight in out-door exercise, that the elevated classes in England reach a patriarchal age, notwithstanding their habits of high living, of late hours, of wine drinking, and many other health destroying agencies; the death of their generals, their lords, their earls and their dukes, are chronicled almost every week, at 70, 80 and 90 years; it is because they will be on horse back, the most elegant, rational and accomplished of all forms of mere exercise, both for sons and daughters. But the whole credit of longevity to these classes, must not be given to their love of field sports; it must be divided with the other not less characteristic traits of an English nobleman—he will take the world easy! And could we, as a people, persuade ourselves to do the same thing, habitually, it would add ten years to the average of human life, and save many a broken fortune and broken constitution.—*Hill's Journal of Health.*

TRANSPORTING EGGS OF FISHES.—In the last sitting of the French *Societe Zoologique d'Acclimation*, M. Millet detailed a series of experiments he had lately made in conveying fecundated eggs. The result was, he said, that the eggs, when wrapped up in wet cloths and placed in boxes with moss, to prevent them from becoming dry and being jolted may safely be conveyed not only during 20 to 30, but for even more than 60 days, either by water, railway, or diligence. He added, that he had now in his possession eggs about to be hatched, which have been brought from the most distant parts of Scotland and Germany, and even from America. M. Millet stated a fact which was much more curious—namely, that fecundated eggs of different descriptions of salmon and trout do not perish, even, when the cloths and moss in which they are wrapped become frozen. "He had even been able," he said, "to observe, by means of a microscope, that a fish just issuing from the egg, and of which the heart was seen to beat, was not inconvenienced by being completely frozen up. This he explained by the fact that the animal heat of the fish, even in the embryo state, is sufficient to preserve around it a certain quantity of moisture."

This is a very important addition to the science of zoology.

There is nothing like a fixed, steady aim, with an honorable purpose. It dignifies your nature, and insures you success.

WHAT wise man would expect to find in a cow the agility and speed of the horse; or in a horse the milky fruitfulness of the cow? And yet, in looking at mankind we are often as unreasonable in our expectations; whilst, for want of considering the peculiar nature and character of each individual, we seek to find qualities in him which his nature and character do not admit of, and which form his proper and distinguishing excellence.

Horticultural Department.

WORK FOR THE MONTH.

[MAY (Latin, *Maivs*) is so denominated from *Maia*, the most beautiful of the Pleiades, and the mother of Mercury, one of the fabled deities. The corresponding Jewish month was *Sivan* (Esther viii. 9,) the *ninth* of their *civil* and *third* of their *sacred* year. The Saxons called it the *Tir-milch-monath*, or *Three-milk-month*, because cows were now milked thrice a day.]

THE PLANTATION.

THIS is one of the most important months of the year, to the planter, and his most vigorous exertions will be needed in pushing forward his operations.

Corn should receive a thorough working immediately, with both plow and hoe, thinning it out, also, to a proper "stand." If your crop was planted very early, and if it escaped the late frosts, you may, perhaps, have already thinned and given it the first working. If so, work it again as soon as possible; and keep the ground stirred as often as once in ten or fifteen days, until your crop is ready to lay by. Remember! that *shallow surface* culture is alone admissible for *Corn*, after it fairly begins to throw out its lateral roots. If the ground was deeply plowed *before* planting, it will now only be necessary to keep the surface open, free from weeds and thoroughly *pulverized*. If it was *not* properly plowed and prepared, we fear no after-culture can remedy the matter; but would recommend a trial of the method described by our correspondent "M.," on page 108, April number, as likely to bring out a backward and badly "put in" crop.

Cotton must also be carefully scraped and moulded, without delay. Let the moulding be done immediately after scraping, as great injury is often done to the young plants by exposure of their roots to the scorching and drying rays of the sun.

Oats, *Rye* and perhaps *Wheat*, may be cut, the latter part of this month. After cutting your *Oats* and other small grain, plow up the stubble land deeply, and plant in *Sweet Potatoes* on the level system, described in our April number, page 121.

Peas may also be sown, or drilled on stubble land, and if a slight coating of manure is added, will make a fine crop. *Oats*, *Pea Vine Hay*, *Sweet Potato Vines*, *Oregon Pea Vines*, &c., &c., should all be plentifully made and carefully saved for the fall and winter feeding of horses, mules and cattle.

Plant a large crop of *Sweet Potatoes*, in hills, ridges, or on the level, as you may deem best. Select a cloudy or rainy day, or the cool of the evening, for setting your "draws"—dip the roots in a thin batter of muck and water, make a hole with a large "dibble" (or pointed stick)—set the "draws" quite deep into the ground, and press the earth firmly around them.

Sow *Corn* abundantly in drills for fodder; also *Millet*, *Doura Corn*, &c. Make the ground very deep and rich, as heretofore directed.

The *Oregon Pea* may be worthy of further trial, as a forage crop. Have any of our readers tested it fairly for hay? If so we shall be glad to hear from them.

THE KITCHEN GARDEN.

Continue to plant *Okra*, *Squashes*, *Melons* of the different varieties, *Cucumbers*, *Lima Beans*, *Sweet Corn*, &c. Transplant from the hot-bed and warm border, the *Tomato*, *Pepper*, *Cabbage*, *Cauliflower*, *Celery*, &c. Plant, also *Snap Beans*, *Radishes*, *Carrots*, *Beets*, *Salsafy*, *Parnips*, &c., for a succession.

Work all your vegetables thoroughly, but be careful not to go too near them with the hoe. Stir the soil also around your young trees and grafts; and rub off superfluous buds and shoots.

If the weather sets in dry and warm, mulch (with leaves, &c.) and water your vegetables. In watering, remove a little of the earth from around the plant, at the surface, pour on the water, and replace the earth immediately, *leaving no moist, or wet surface exposed to the drying and baking action of the hot sun*. If the plants are mulched with forest leaves or other litter, the water may be poured on, *through the mulching*, without injury. Rain water is the best for all plants; but, if obliged to use well or spring water, let it stand exposed to the sun and air for several hours before you apply it.

The *Strawberry* patch should now receive a careful working. The weeding-hoe may be used between the rows, keeping, at least, 6 inches from the plants, to avoid injury to the lateral or surface roots. This will leave a space of a foot, which is our custom to work with a prong-hoe of two tines, 6 inches long and 3 inches apart; any blacksmith can make it. After loosening up the earth around the plants with this or a similar implement, and destroying the weeds, spread a coat of partially decomposed leaves or saw dust underneath and around your plants, to keep the earth moist and the fruit clean. This belt of mulching may occupy all the space between the rows, if you are cultivating solely for *fruit*; but if you desire *new plants*, it need only extend 8 or 10 inches, on each side of the row of plants, leaving a space of ground in the middle for runners to strike root. This space should be kept open, mellow, and entirely free from weeds. Any mulch, to be of service, must be at least 3 or 4 inches thick. By the method herein directed, and the use of plenty of water, in dry weather, Strawberries may be plentifully enjoyed for several months. The runners of *staminate* and *hermaphrodite* varieties should be cut off as fast as they appear. The *pistillates*, generally, are not so prone to the production of runners.

Weeds will now need particular attention. Cut them down—rake them off, and totally exterminate them by rotting in the manure pile, or by fire.

THE ORCHARD.

Destroy Caterpillars as directed last month—plow up the strips of vacant land between your trees and sow *Cow Peas*, broadcast, to turn under as a manure. Try the effect of lime, ashes or sulphur dusting over the leaves of Plum trees, when the dew is on, as a preventive to the ravages of the *Curculio*—also, try thickly of stable manure spread around their roots—apply the wash recommended last month as a remedy for the Peach Borer, and renew the application, during this and the two following months.

If any of our readers are fortunate enough to have fruit this year, let them see to it that their trees do not overbear. A careful thinning will add much to the size and quality of the fruit left, and prevent injury to the tree. As for ourselves, the *frost*, elsewhere mentioned, has saved us all trouble in thinning, for this year, at least.

THE FLOWER GARDEN.

Cultivate, shade, weed, mulch and water your flowers, and observe the general directions for last month.

Use hard soap to wash your clothes, sud soft to wash your floors. Soft soap is so slippery that it wastes a good deal in washing clothes.

TREATMENT OF FRUIT TREES.

A CORRESPONDENT of the *German-town Telegraph* writes as follows. He is speaking particularly of the *Peach* and *Plum*:

The following treatment of fruit trees was communicated to me, by a lover of good fruit, who has taken great pains to have plenty of fruit, and that which is good. In the beginning of the month of April, [February, in the South] take a handful of rock salt, and put around the roots, close to the trunk of the trees. Then leave the trees until the first of May, [March] when a good coat of lime should be applied to the bodies of the trees.* At the same time make a strong decoction of hickory wood ashes and water, by boiling them together, and apply this plentifully to the roots of the trees, by pouring it around them while in a boiling state. This will kill the worms and insects, or prevent them from injuring the trees. After trees have been acted on a few times in this manner, the bark becomes smoother, and the knots of young trees, which are found particularly on the plum, will disappear. The trees grow more thrifflily, and bear double the quantity of fruit they would without the application.

It is often a complaint among many farmers, that their peach and plum trees will not do any good, but if they will try this simple application, their complaints will cease. One of my neighbors who had several plum and peach trees, and who had tried various ways to make them bear, without effect, determined on cutting them down; but after some persuasion, last spring, he was induced to give this mode a fair trial. The result was that his trees were loaded with good fruit, and instead of having to buy, he had considerable to sell.

Let each of your readers try it, and see if it does not produce the desired effect. ARBORIST.

*REMARKS.—We are not informed *how* the lime is to be applied, whether as a liquid wash, or rubbed dry. Such directions are too common in agricultural papers, and too vague, to be of any use.—EDS.

THE OSAGE ORANGE.

The following history of the first introduction of this well known hedge and ornamental plant, will be read with interest. It is from the pen of DAVID LANDRETH, the seedsman, of Philadelphia, and was published in the *German-town Telegraph*:

In the report of the last meeting of our Agricultural Society, it is stated I expressed the opinion that the Maclura or Osage Orange, pruned with the severity recommended by Dr. Warder, of Cincinnati, in his address on that occasion, would not be long-lived. My opinion, founded on the experience of many years, is precisely the reverse; I believe it to be in a remarkable degree, adapted to hedging purposes—perhaps more so than any other plant. The doubt I did express, imperfectly heard by the reporter, was whether the Honey Locust was of similar value, and I do very much doubt its adaptation to hedges, to which it has been applied; while on the contrary the Maclura has every good quality to commend it—hardiness, vigorous growth, endurance of the shears without disease or morbid growth being induced, acrid juice which protects it against the attacks of insects, pungent spines, and disposition to branch when “cut in”—these and other qualities indicate it as a plant which, it might almost be said, nature had designed for protecting the labors of the husbandman.

While on this subject, will you indulge me with space for a few incidental remarks, on the original application of the Maclura to hedging purposes? During the admin-

istration of Mr. Jefferson, the Western Exploring Expedition, known historically as Lewis & Clark's, was made, and resulted, among other things then considered vastly more importance, in the discovery of this tree, in the Osage country, which from its use by the Indians, they named *bou-wood*—a few seeds collected by them reached Philadelphia, and from one of those seeds was produced the noble specimen, still standing in the rear of my father's old homestead, on Federal street. Its pendant branches, and deep green, glossy foliage, which no insect would approach, was for many years the admiration of all who visited the nurseries. For some considerable time the only mode of its increase was by cuttings of the root, placed in pots under glass, and in that way some thousands were produced, which from their great rarity were deemed of sufficient importance to be exported to Europe in charge of a special agent sent out by the late D. & C. Landreth, who disposed of them in London, and they now doubtless decorate the pleasure grounds of our aristocratic cousins. The parent tree in course of time flowered and produced abundance of fruit, which, from the circumstance of the specimen being *pistiliferous*, was imperfect. At a later period, another tree of similar origin, planted at the seed grounds on Fifth street, produced *staminiferous* flowers, which as an experiment, were cut off with branches attached, carefully wrapped in sheets, and conveyed to the female tree, a distance of two miles, when, greatly to the delight of all made acquainted with the fact, many bushels of “oranges,” each with perfect seed, was the result! About the same time, trees at M'Mahon's nursery, also produced seed, and the supply of plants rapidly increased, faster than the demand for ornamental purposes, to which they had hitherto been solely devoted.

My father, perceiving the promise of the Maclura as a hedge plant, used some hundreds of surplus ones, to fill open spaces in hedges of English hawthorn, which he had set out, in accordance with his early tastes, many years previously. As he had anticipated, they formed an impenetrable mass, and established it in his opinion, as the best of all plants for hedges. Many thousands were produced with a view to their sale for that purpose, and attention was called to them in various ways, among others I (then a youth,) wrote several articles on the subject, which were widely republished, especially in the West, where the means of enclosing prairie lands were of primary interest. This may have been about 1828.

Since then the Maclura has been slowly gaining in popular favor, and the seeds and plants have become articles of considerable trade. The former are now annually collected in Arkansas and Texas, to the extent, it is said, of thousands of bushels, and from reliable statements it is supposed *two hundred thousand dollars* are yearly expended in this country, principally in the West, for the seed alone. The plants are also raised in large quantities, and set out and trained at a stipulated sum per rod, by parties who travel from farm to farm. The attention of Europeans is also directed to it, and it is presumed for the same purpose, as within a few weeks I have filled an order from the “continent,” for a considerable quantity of seed.

Thus, Mr. Editor, from an accidental circumstance has important results ensued, and we may in reference to it, apply one of the early lessons,

“Big oaks from little acorns grow.”

DAVID LANDRETH.

Bloomsdale, March, 1855.

AN ENORMOUS CROP.—Elijah Moore, a Virginia farmer, who removed to Iowa, took the premium for corn at the Washington county fair. He raised one hundred and twenty bushels to the acre.

THE DIOSCOREA JAPONICA.—Of this new Japanese or Chinese esculent root, (*Dioscorea Batatas*) it is said to have been proved by repeated experiments of French cultivators that when cooked in the ordinary manner, from the large amount of farinaceous properties it contains, it can never become waxy, as is generally the case with the potato. Its flavor resembles in delicacy the ash-leaved kidney potato, and when dried and reduced to powder it is equal to the best arrow root: or mixed in the proportion of one third with two thirds wheaten flour, it makes an exceedingly light and wholesome bread, as well as a very superior pastry.

CHINESE SUGAR CANE.

We are indebted to Messrs. PARKER, WHITE & GANNETT, seedsmen and agricultural agents, Boston, Mass., for the following interesting article on the new plant described in our April number, page 130.

In a note to the Editors of this journal, one of the firm writes as follows:

EDITORS SOUTHERN CULTIVATOR—The following is a copy of an extract from a communication from our correspondent at Paris, M. LOUIS VILMORIN, a Chemist, and one of the leading Agriculturists of France. You will see that he makes his comparison with the Sugar Beet, that being the source of their present supply of sugar.

Whether the quantity of saccharine matter is increased or diminished by growing in our climate, can only be known by experiment.

It is reasonable to suppose, however, that in your more sunny and warm climate of the South, there will be an increase of the product of sugar.

Yours respectfully,

GEO. E. WHITE.

Boston, Mass., April, 1855.

CHINESE SUGAR CANE—*HOLCUS SACCHARATUS*.)

The plant which I have presented to the Society of Agriculture in the name of our correspondent, M. RANTONNET, of Hyeres, is called *Holcus Saccharatus*—Sorgho Sucre. It was known in Italy in the beginning of the century, but either because the process of extraction known at that time was not brought to sufficient perfection for it to be managed to advantage, or because the stock which they possessed of it was less rich, its culture was abandoned.

Four years ago, M. DE MONTIGNY, French Consul at Shanghai, China, sent to the Geographical Society a collection of seeds, among which was found a packet labeled "Sugar Cane from the North of China." These seeds were largely distributed by the Geographical Society and I have this year cultivated a small lot that I have received from one of my correspondents of Champagne, M. PONSARD, of Oney. This plant is the same botanically as the "*Holcus Saccharatus*" formerly cultivated by L. ARDINO, and the letter of M. RANTONNET who requested me to present it in his name to the Agricultural Society, has put me in the way of the origin of this new introduction.

You will see that the experiments to which I have subjected the plants are very limited. A stalk weighing 450 grammes (a gramme is equal to 19 grains) gave me at the first trial in de, Oct. 13th, 150 grammes of juice, clear, limpid, and with the flavor of sweetened water. The juice proceeding from the entire stalk gave me 10.8 for 100, of its weight, of sugar. Another trial of the Saccharimeter made Nov. 28th, gave figures varying from 14.6 to 13.8 for '00 of sugar. I have moreover observed that the proportion of sugar decreases in the successive spaces between the joints, in proportion as they rise. Those in the lower part and middle of the stalk being the sweetest.

I have under cultivation some superficial metres of our

Sorgho in a garden plot not rich, and in the neighborhood of trees which would injure its development. In the state in which it was, the plant offered by the square metre towards 20 stalks of sufficient strength to extract the juice. This produced 3 kilogrammes of juice by the square metre, and 30,000 kilogrammes by the hectare—two and a half acres. Estimating the rendition of the juices as 10 to 100, this would be 3000 kilogrammes of sugar to the hectare.

From these first figures, there is some probability that we will prefer the plant which we describe to the Sugar Beet, but it will, without doubt, require several years of study before we can be sure that its introduction should be regarded as a nindustrial event. At any rate, it will be valuable to furnish, abundantly, alcohol deprived of a disagreeable taste, and as a rival of the beet in the production of sugar. This plant is cultivated in the same way as Maize, to which it bears some resemblance.

REMARKS.—We are testing this plant, on a small scale, in the hope that it may prove valuable for forage. If it will grow luxuriantly and stand our long drouths, the large amount of saccharine matter which it contains will make it useful as fodder for stock, leaving the production of sugar and alcohol out of the question. Seed may be obtained from Messrs. PARKER, WHITE & GANNETT, Boston.—Eds.

FLORIDA—ITS SOIL, CLIMATE AND PRODUCTIONS.

THE ORANGE.—This tree, at one time, furnished the leading export of Florida. Previous to the great frost in 1833, it is said that there were over two millions shipped annually from St. Augustine alone. The orange of Florida is very large and fine flavored, and commands the highest price of any in the market, having been sold in the grove as high as \$10 per thousand. It has been remarked that the fruits of the tropics, generally, grow to the greatest perfection near its verge. This is certainly true in regard to the orange and banana, which, in the northernmost Bahama Islands, are much superior to those of Cuba, St. Domingo, and localities still nearer to the equator. From the shores of the Atlantic to the Mississippi, the great frost of 1833 completely ruined the orange groves. The effect was probably nowhere so severely felt as in Florida, where they furnished the staple crop of the country. The effect upon the city of St. Augustine, which was one vast orange bower, is thus described by Williams:

"All kinds of fruit trees were killed to the ground, and many of these never again started from the roots. The wild groves suffered equally with the cultivated ones. The orange had become the staple of our commerce, several millions being annually exported. Numerous groves had just been planted, and extensive nurseries could scarcely supply the demand for young trees.

"Some of the groves, the previous autumn, had brought their owners one, two and three thousand dollars; and the increasing demand for the fruit opened prospects of mines of wealth to the inhabitants,

"Then came a frost, a chilling frost."

Some of the orange groves estimated to be worth \$10,000 were at once rendered worthless. A portion of the population of St. Augustine who had been accustomed to look to their orange groves for the purchase of luxuries and of necessities, were left suddenly without resource. The town of St. Augustine, that heretofore appeared like a rustic village, its white houses peeping from the clustering boughs, and golden fruit of its favorite tree, beneath whose shade the foreign invalid cooled his fevered limbs, and imbibed health from the forest tree, how is she fallen! Dry, unsightly poles, with rugged bark, stick up around her dwellings, and where the mocking bird delighted to build her nest, and tune her lovely songs, owls now hoot

at night, and sterile winds whistle through the leafless branches. Never was a place more desolate."

Years passed on. A new growth had, in a measure, redeemed this desolation, when a new calamity was experienced, not as sudden, but eventually as destructive as the frost. This was the visitation of the insect, against whose ravages nothing was found to avail. Grove after grove became blighted, yet, as some localities were spared for several years, it was hoped the destruction would not be universal. The insect first made its appearance at Mandarin, a flourishing village on the banks of the St. Johns. It was thought by some to have been imported on a couple of trees brought from China and planted here. Its true origin is, however, as little known, as its remedy. Like the weevil in the Northern and Western wheat fields, nothing can stop its progress until it has run its appointed cycle, and it will probably disappear as mysteriously as it came. Twice, during the last hundred years, has the orange in the Mediterranean and South Europe been similarly attacked. And the hope that here, as in Europe, the insect will pass away, still continues to cheer the Florida orange grower, and he awaits the happy moment to renew his operations with renewed vigor.

Had it not been for this calamity, the beautiful banks of the St. Johns, now mostly a wilderness, would probably, by this time, have been studded with villas, and fringed with orange groves, and thus they will be when the orange can again be successfully cultivated. With the extraordinary facilities for a market which Florida will soon possess, there can be little danger of the supply exceeding the demand.

An orange grove of common sized trees will produce from 500 to 2,500 oranges per tree, worth \$3, and \$25, per tree. One hundred trees or more can be planted upon an acre. Very little labor is required to keep a grove in good condition. The sour orange, which grows spontaneously all over the peninsula, may be budded with the sweet orange, and will bear in three years. In many places the banks of lakes and streams are lined with wild groves of orange, some of them great in extent. These do not seem to regard the insect to any great extent, and continue to hang their golden clusters amid the green. On the upper waters of the St. Johns, and also on the Atlantic coast near New Smyrna, fine oranges are now produced; these from the groves of Mr. Sheldon and Dr. Speer being of peculiarly large size and delicious flavor.

Lemons and Limes grow very thickly in Florida, and are abundant in a wild state. The Sicily lemon, transplanted in Florida, is much improved from the original; the writer of this has seen a specimen which measured eleven inches in circumference.

The pine-apple, guava, banana, plantain, sappadillo, tamarind, cocoa, sour sop, shad-dock, grape-fruit, forbidden fruit, mamce-apple, mango, sugar apple, citron, cassava, arrow root, &c. &c., are also productions of Florida, and will be mentioned at greater length hereafter.

The Fig attains perfection in Florida. There are several varieties of this fruit, those of a dark purple color and about the size of a hen's egg, being preferred for the desert. A branch cut from a bearing tree, and merely stuck in the ground, will produce fruit in two years. No attempt has been made to preserve dried figs in Florida, but it is evident that some method to do this could be devised; in which case New Smyrna of Florida might rival the Asiatic Smyrna in her export of the delicious fruit.

The Hawey is a miniature Fig, growing upon a large beautiful tree in Southern Florida. The fruit is about the size of a hazel nut, and grows from the limb of the tree without any apparent blossom. It is of a dark brown color, and resembling the fig in taste.

The Persimmon is a delicious fruit, when fully ripe. In fact, when it is in perfection, there are few tropical

fruits that can rival it in richness; when green it has a fragrant astringency only equaled by the prickly-ash or the wild turnip. The natives of Florida used the dried persimmon extensively as an article of food, and we read in the lists of stores and provisions, furnished by them to the old Spanish expeditions, of cakes of dried persimmon.

[Florida News.]

SHORTENING IN LIMA BEANS AND SQUASHES.—Clipping the shoots of Lima beans, when about six feet high, produces an abundant crop, the beans ripening sooner. Squashes, the vines of which are nipped after two or three squashes had formed, are larger and ripened better. By cutting out the early bearing branches a succession of squashes are obtained through the summer. Tomatoes which grow on an excessively rich piece of ground are benefitted by shortening, new and more vigorous shoots successfully pushing out in place of those which are clipped.

DEPTH OF PLANTING SEEDS.—We find the following from a foreign author, among the papers read before the Farmer's Club of the American Institute:

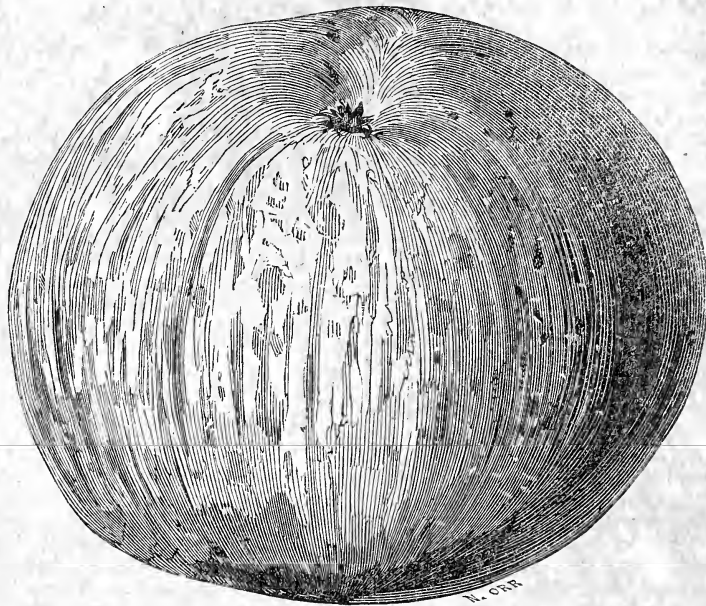
Seed buried 1 2 inch deep, up in 11 days, 7-8ths of them; 1 inch deep, in 12 days, all; 2 inches deep, in 18 days, 7-8ths; 3 inches deep, in 20 days, 3-4th; 4 inches deep, in 21 days, 1-2; 5 inches deep, in 22 days, 3-8ths; 6 inches deep, 23 days, only one came up.

The rays of the sun furnish light—those nearest the yellow are remarkable for impeding the heat-giving rays are favorable to it, if plenty of water is present; while the blue rays, or these concerned in chemical action or actinism. (from the Greek actin, a ray,) accelerate the process and cause a rapid growth. His experiments were, making the light pass through colored glasses upon the vegetable. He thinks that a blue glass will prevent scorching of leaves, and that red glass will increase the heat. He says that a pale green glass made with oxide of copper, is best fitted for conservatories—green being a compound of the yellow or luminous rays with the blue or chemical rays. A delicate emerald green glass has, at his suggestion, been used in glazing the large Pall House at Kew.

TASTE OF TURNIPS IN BUTTER.—A correspondent at Philadelphia writes us that he had abandoned the use of turnips as feed for milch cows on account of the disagreeable taste imparted to the milk and butter. He met with the following easy method of removing this objection, and has practiced it for five years with perfect success, both with common flat turnips and with ruta bagas: Slice the turnips 12 hours before they are wanted, put them in a heap or basket and sprinkle over them a slight coating of fine salt. After they have lain in the heap 12 hours, mix them well together and give to the cows—*Country Gentleman*.

AN EDITOR'S RANCHE.—A letter from New Braunfels, Texas, to the Galveston News, dated February 23d, says:

I paid a visit yesterday to the rancho of G. W. Kendall, Esq., of the New Orleans Picayune, and found him busily making improvements on the beautiful site he has selected for his future home. He has already built a good substantial stone house, commanding a fine view of the surrounding country, which extends for miles through a romantic region, interspersed with wild scenery of the finest character. His chief attention has been directed to the raising of sheep, in which he has succeeded well since his removal to the valley of the Comal. His stock is the finest I have seen in Texas, being composed mostly of pure blooded Merinoes, which produce the finest and most costly wool.



SOUTHERN SEEDLING APPLES--- No. 8.

NICKAJACK APPLE.

This apple originated with the Cherokee Indians in Macon county, North Carolina, and takes its name from a creek of the same name. It was brought into notice and is extensively cultivated by that enthusiastic and liberal gentleman and pomologist, SILAS McDOWELL, Esq., of Franklin, North Carolina. It is one of the finest winter Apples, and a delicious fruit withal; of a brisk acid, and fully first rate—ripens late, and keeps well until May. Recommended for general cultivation. Size from medium to large.

Clarksville, Ga., 1855.

J. VAN BUREN.

Domestic Economy and Recipes.

A MODE OF IMPROVING BREAD.

BY PROF. LIEBIG.

It is known that the vegetable gluten of the various kinds of grain undergoes a change when moist; in a fresh condition it is soft, elastic, and insoluble in water, but in contact with water it loses these properties. If kept a few days under water its volume is gradually increased until it dissolves, forming a thick mucilaginous fluid, which will no longer form a dough with starch. The ability of flour to form a dough is essentially lessened by the property of vegetable gluten to hold water, and to place it in the state, for example, in which it is contained in animal tissues, in meat and in coagulated white of egg, in which the absorbed water does not moisten dry bodies. The gluten of grain, in flour not recently ground, undergoes a change similar to that which it suffers when in a wet state, for the flour absorbs moisture from the air—being in a very high degree, a water-absorbing substance; gradually the property of the flour of forming dough is lessened, and the quality of the bread made therefrom injured. It is only by artificial drying and keeping from the air that this deterioration is prevented. In rye flour, this change occurs as soon perhaps sooner than in wheat flour.

About twenty-four years ago, the Belgian bakers commenced the use of a remedy, by means of which bread equal to that made from the freshest, best flour, was manufactured from flour, which, by itself, would give only damp, heavy bread. This remedy consisted of an addition of alum, or of sulphate of copper, to the flour.

The effect of both these substances in the preparation of bread rests upon the fact that when warm they form a chemical combination with the gluten, (previously made soluble in water, and changed thereby,) which restores to it all its lost properties; it is again insoluble, and capable of holding water.

The relations of vegetable gluten to caseine, with which it has so many properties in common, induced me to make some experiments, whose object was to replace both of the substances (sulphate of copper and alum) so deleterious to health and to the nutritious properties of bread, by some substance having the same effect, (as regards the gluten,) but devoid of injurious qualities.

This substance is pure cold-saturated lime-water. If the lime water be mixed with the flour intended for dough, and then the yeast or leaven added thereto, fermentation progresses in the same manner as in the absence of lime water. If at proper time more flour be added to the "risen," or fermented dough, and the whole formed into loaves, and baked as usual, a sweet beautiful, fine grained, elastic bread is obtained, of exquisite taste, which is preferred by all who have eaten it any length of time, to any other.

The proportion of flour to lime-water is 19.5; that is, for 100 lbs. flour, take 26 to 27 lbs. or pints of lime-water. This quantity of lime water does not suffice for mixing the

bread, and of course common water must be added, as much as is requisite.*

As the sour taste of bread is lost, much more salt may be used to give it a palatable quality.

As to the amount of lime in the bread, 1 lb. of lime is sufficient for 600 lbs. of lime-water. In bread prepared as above, there is nearly the same amount of lime as is found in an equal weight of leguminous seeds—(peas and beans.)

It may yet be established as a physiological truth, by investigation and experiment, that the flour of the cereal grain is wanting in the property of complete nutrition, and from what we know thereof, the cause would seem to lie in its deficiency in the lime necessary for the formation of the bones. The cereal grains contain phosphoric acid in abundance, but they contain far less lime than the leguminous seeds. This fact may explain many of the phenomena of diseases observed among children in the country, or in prisons, if the food consists principally of bread; and in this connection the use of lime-water by physicians merits attention.

The amount of bread produced from a given quantity of flour, is probably increased in consequence of an increased water-compound. From 19 lbs. of flour, without lime-water, seldom more than 24 1-2 lbs. of bread were obtained in my house; the same quantity of flour, baked with 5 lbs., of lime-water, gave 26 lbs. 6 oz. to 26 lbs. 10 oz. of good, well baked bread. Now, since, according to Heeren's determinations, the same quantity of flour gives only 25 lbs. 1 3-5 oz. the increase of weight, in consequence of the use of lime-water, appears to me indubitable.

CAKE YEAST.—Take a spoonful or two of brewer's or distiller's yeast, or if it can be had, a yeast cake left from a previous supply, which should then be thoroughly dissolved in a little water. Stir this into a pretty thick sponge of flour and warm water, and let it stand till night. Boil a handful of hops down strong and strain, stir in flour while boiling hot, till you have a stiff batter, let this cool to blood heat, then stir in the sponge and let it stand till perfectly light, when Indian meal should be added, enough to make a stiff dough. Roll it out, cut into cakes half an inch thick, and lay them on a board and dry about ten days, in the shade, turning them each morning. Keep them hung up in a close bag and they will remain good for years. A little boiled potato improves the sponge.—*Ohio Cultivator.*

TO KEEP AWAY ANTS.—Spirits of turpentine placed in their way, or placed around sweetmeats, will effectually intercept these troublesome insects—it must be kept up for two or three days. It will also remove the striped bug from vines, by wetting a string and placing it around the hill.

JOHNNY CAKE.—1 pint of sour milk, 1 egg, 1 spoonful of molasses, 2 spoonfuls of wheat flour, Indian meal sufficient to make a light batter, 1 teaspoonful of saleratus, dissolved in warm water.

* As many persons may not be familiar with the process of preparing lime-water a recipe for the same is added:

Take four ounces of lime and one gallon of distilled water. First, pour a little of the water upon the lime, to slake it; then add the remainder of the water and stir well together; cover the vessel immediately, and set it aside for three hours. Keep the solution, together with the undissolved lime, in stoppered glass bottles, and pour off the liquid when it is wanted for use. Water free from saline or other obvious impurity may be employed in this process without distilling.—*Trans.*

Advertisements.

AMERICAN EDITION.

DAVY'S HERD BOOK OF DEVON CATTLE.

EDITED BY AMBROSE STEVENS.

C. M. SEXTON & CO., 152 Fulton st., New York, propose to reprint, from the English Edition, "DAVY'S DEVON HERD BOOK." This work was published in England at \$2.75, and would cost here if imported, \$3.50. It is comprised in two volumes, the first of which is not now to be obtained, being out of print. It will be republished at a price not exceeding \$1. The publishers do not propose this undertaking for pecuniary advantage to themselves, as the cost will equal the price of the book; but as they confine their attention to the publication and sale of Agricultural Books, and this work being in their line, they wish to meet the wants of the public in this respect. It contains "the Pedigrees of some thousands of Devon Cattle," both of England and America. The pedigrees of American Herds contained in the English edition will be corrected and extended, where the editor has, from knowledge, the means, or where breeders and owners will furnish the means to do so.

AN APPENDIX will be added, containing authentic pedigrees of American Devon Cattle, not included in the English edition. To this end, we request the co-operation of breeders and owners, by forwarding their pedigrees immediately, postage paid, to C. M. SEXTON & CO. New York. Those who will furnish cuts of portraits of their animals, and pay the cost of paper and printing, can have them inserted.

This work is indispensable to every breeder of Devon Cattle in America, and must be possessed by them if they would understandingly pursue their business. Breeders can afford to take a large number of copies to distribute to their customers and the public, as advertisements of their herds. The American edition will be edited by Hon. AMBROSE STEVENS, editor of "Youatt and Martin on Cattle," "Youatt and Martin on the Horse," &c., &c. Subscribers will forward their names to the undersigned.

C. M. SEXTON & CO.,
152 Fulton street, New York.

May 55—1t

ALBANY AGRICULTURAL WORKS,

ON Hamilton, Liberty and Union streets; Warehouse and Seed Store, removed to No. 52, State street, Albany, N. Y. The proprietors of the above named establishment being the sole owners and manufacturers of EMERY'S PATENT HORSE POWER, &c. All arrangements with other parties for their manufacture having expired, have formed a new copartnership, under the firm name of EMERY BROTHERS, and will continue the manufacture and sale of AGRICULTURAL IMPLEMENTS AND MACHINERY, as heretofore, at the old stands of EMERY & Co. By this arrangement the united efforts and interests of the Brothers, long known to the public, are secured, and no exertions will be spared to meet the wishes of those dealing in and using the class of implements they manufacture their leading branch being the manufacture of the justly celebrated EMERY'S PATENT CHANGEABLE GEARED RAILROAD HORSE POWERS, with the Machines to be propelled by it, as Threshing Machines, Saw Mills and Machinery generally.

These Powers having been submitted repeatedly to the most severe tests and trials to determine their relative merits and utility with those of every known manufacturer, have, without exception, been awarded the highest prizes for superiority—among which were the following:

N. Y. State Ag'l Society, 1854, 1853, 1852, 1851, 1850; Ohio State Board of Agriculture, 1854, 1853, 1852, 1851; Michigan State Agricultural Society, 1853, '52, 1851; Indiana State Agricultural Society, 1853; Illinois State Agricultural Society, 1853; Pennsylvania State Agricultural Society, 1853; Maryland State Agricultural Society, 1853; Missouri State Agricultural Society, 1853; American Institute, 1852, 1851; New York Crystal Palace, 1853; Canada Provincial Society, 1852, 1851; Connecticut State Agricultural Fair, 1854.

WARRANTY, CAPACITY, ECONOMY, &c.—The Two Horse Power and Thresher, is capable with three or four men, of threshing from 175 to 225 bushels of wheat or rye, and the one horse power from 75 to 125 bushels of wheat or rye; or both kinds of powers, &c., are capable of threshing double that amount of oats, barley or buckwheat, per day, of ordinary fair yield. If the crops be extraordinary heavy or light, greater or less results will follow.

These Powers, Threshers, &c., are warranted to be of the best materials and workmanship, and to operate at represented by this Circular, to the satisfaction of the purchasers, together with a full right of using them in any territory of the United States, subject to be returned within three months, and home transportation and full purchase money refunded if not found acceptable to purchasers.

The public may rest assured the reputation heretofore earned for our manufactures, shall be fully sustained, by using none but the best material and workmanship; and by strict attention to business, they hope to merit and enjoy a continuance of the patronage heretofore so liberally bestowed, which we respectfully solicit.

N. B. All articles bear the name of "EMERY" in raised letters upon the cast iron parts, and however much others may resemble them, none are genuine without this mark.

Full descriptive illustrated price catalogues sent gratis on application.

Albany, N. Y., March 15, 1855.

EMERY BROTHERS.
April—3m

FANCY LOPE-EARED RABBITS.

A FEW pair of beautiful Lop-Eared MADAGASCAR RABBITS may be obtained by addressing the subscriber.
March 55—1t

D. REDMOND, Augusta, Ga.

NEW YORK STATE AGRICULTURAL WORKS, BY WHEELER, MELLICK & CO., ALBANY, N. Y.

ENCOURAGED by the preference which has been given to our Machines wherever they have been introduced, we take pleasure in announcing to the Farmers and Planters of the United States, and to Dealers in Agricultural Machines generally, that our arrangements for the year 1855, are on a scale sufficiently extensive to enable us to fill our increased orders with promptness and despatch. We have continued to adopt every alteration that experience suggests, and through it proves to be valuable. Our manufacturing facilities, including steam lathes, turning machinery and tools, are unequalled in extent and completeness, by any similar establishment in the world; and each branch—iron wood turning, work, and finishing—is under the immediate supervision of a competent and experienced partner who, personally inspects materials and workmanship. We employ competent workmen, and have no job or piece-work done. In our long experience; our determination to make each article the best of its kind; in our superior manufacturing facilities; in the continually increasing popularity of our Machines wherever they are used, and in our sure and tried warranty, we trust the public will continue to find the strongest guaranty that can be given, that our Machines are unequalled in the quality of their work, durability, convenience and cleanness.

A medal was awarded to WHEELER'S POWER AND THRESHING at the recent Crystal Palace Exhibition in the City of New York.

WHEELER'S PATENT ENDLESS-CHAIN RAILWAY HORSE POWER.

These Horse Powers are unrivalled for driving all kinds of Farmers' Planters' and other Machinery, which admits of being driven by Horse Power. They are made for either one or two horses, and their superior merits, in point of durability and ease of running, are fully established; while their compactness and simplicity, lightness, and greater length and width, of Treading Floor and Stall, give them an advantage over other Powers, which are highly appreciated by those who have tried them. Several thousands are in use, some of which have threshed over 100,000 bushels, and though our present Powers are much improved over the oldest ones of the same kind, yet the latter are still good. Over 100 of them were sold by us and our agents the past season, (a larger number than in any previous year) thus proving the increasing popularity.

WHEELER'S PATENT COMBINED THRESHER AND WINNOWER.

This Machine is a late invention. It was got out three years ago, after a long series of experiments resulting in a machine which performs the three operations of Threshing, Separating and Winnowing, with as much dispatch, and as few hands and horses as are required to thresh and separate only with other machines, and although designed for so complicated work it is yet a model of simplicity and compactness. The entire running parts are driven by the main belt and one small band. We have no doubt it is the most perfect machine in use for Threshing and Winnowing. Driven by two horses, they thresh and clean from 150 to 200 bushels of wheat, or twice that quantity of oats per day.

We give a notice of it from the *Village Farmer*, published at St. Louis, Mo., and also two letters from gentlemen, who have the machines in use, showing the estimation in which they are held, proving that these two are about an average of many other similar letters, which we can show.

[From the *Village Farmer* of August, 1853]

"WHEELER'S COMBINED THRESHER AND WINNOWER"

"We take pleasure in laying before our readers the following extract from a letter just received by us from a very respectable individual in Cape Girardeau County, Mo., to whom we sold one of these machines about a week ago, with the understanding that if it did not work to his satisfaction he could return it to St. Louis at our expense. It will be recollected that the manufacturers warrant these machines to thresh and clean from 150 to 200 bushels of wheat per day, or twice that quantity of oats."

"APPLE CREEK Mo., July 18, 1853.

"Mr. E. Abbott,—Dear Sir—I have tried my Thresher and Winnower, and it has given entire satisfaction. I have moved the machine one mile, set it up, and threshed 24 bushels of wheat in one day, and have threshed 40 bushels in an hour. It works finely and is considered the best machine to thresh and save grain in South-East Missouri.

"Don't go back to St. Louis."

"I think I shall thresh from 8,000 to 10,000 bushels of wheat this season. Yours truly, JAMES F. COLYER."

Another gentleman, to whom we sold our Double Power and Combined Thresher and Winnower, writing to us from Orange County, N. Y., under date of Dec. 9th, 1853, says:

"I have received the machine, and used it, and it gives the very best of satisfaction that could be expected. Yours truly, HENRY J. HOWE."

Having sold between 300 and 400 of the Winnowers during the past season, we could, if space permitted, give many other testimonials to their utility, but the above must suffice.

WHEELER'S OVERSHOT THRESHER WITH VIBRATING SEPARATOR.

This Machine is also our own invention, and has been in use 8 or 14 years, and its many advantages are appreciated by other manufacturers, as well as the farming public. Driven by our Double Power, it threshes and separates from the straw from 150 to 200 bushels of wheat, or twice as much oats, per day. For the Single or One Horse Power we make a smaller Thresher and Separator, which threshes from 75 to 100 bushels of wheat per day. The smaller machine is adapted to moderate sized farms, and as the Single Power is sufficient for sawing wood, clearing, cutting stalks, straw, &c., and driving all saw, yard, &c. machinery used by farmers, it is the best by changing horses and elevating the Power, properly of the line, much faster than we stated above. It is a very popular machine in some sections. We would also call special attention to our Clover Hullers, Portable Saw Mills and stalk and Straw Cutters, each of which is adapted to both our Double and Single Powers.

All our Machines are WARRANTED to give entire satisfaction, or they may be returned at the expiration of a reasonable time for trial.

PRICES:

For Double or Two Horse Power Thresher and Separator, including belts, wrenches, and oil cans, complete	\$170 00
Double Power alone, including belt	120 00
Do. with oil belt	115 00
Double Thresher and Separator, alone	4 00
Single or One Horse Power, Thresher and Separator, including belts, oil cans and wrenches, complete	125 00
Single Power, alone, including belt	9 00
Do. without belt	85 00
Single Thresher and Separator, alone	78 00
Clover Hullers	22 00
Straw and Stalk Cutter for Horse Power	32 00
Circular Saw Mill, with 24 inch saw	38 00
One Horse Power, without band wheel	81 00
Churn Gearing	1 00
Band Wheel	5 00
Band for Power	5 00
Double Power, with Combined Thresher and Winnower, including belts, wrenches, &c.	245 00
Combined Thresher and Winnower, alone	125 00

Orders are solicited and will be promptly filled.
Address WHEELER, MELLICK & CO., Albany, N. Y.
May 55—t

SUPERIOR THOROUGH-BRED DEVON CATTLE, AND ESSEX PIGS, FOR SALE!

THE Subscriber having this day purchased from Dr. W. P. Wainwright, his interest in the herd of DEVON CATTLE, hitherto owned conjointly by them, will continue to give his strict attention to the breeding and raising of this increasingly popular breed. Having now a herd of over twenty head, bred entirely from animals of his own importation, he is enabled to offer for sale a few young bulls and heifers of very superior quality.

Also constantly on hand thorough bred ESSEX PIGS, descended from the best imported stock. For full particulars as to age, price, pedigree, &c., address C. S. WAINWRIGHT, April—8t Rhinebeck, Dutchess County, N. Y.

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A SEA Island Cotton Plantation, containing 900 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skiddaway Island, in Chatham County, on a bold salt water river, the health of which is unquestionable, and the facility for manuring with marsh and mud is unsurpassable; the land lying three des on the river. The place is situated 1 mile from Savannah. The lands of Skiddaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters and for stock raising. Price \$3,500. Terms accommodating. Apply to S. F. DUPON, Savannah Ga.
Isle of Hope March 9, 1855. Ap 11—tf

F. MCCREERY,
Charleston.

R. M. HOOKE,
Chattanooga.

MCCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures to the receiving and forwarding of Freight, and to the filling of orders in this market. Feb 25—C y

ATKINS SELF RAKER REAPER AND MOWER.

THREE seasons use of this ingenious, but useful and yet simple Machine, furnish a convincing proof of practical worth. Three hundred, scattered into 9 different States the past season, mostly in inexperienced hands, and nearly all giving good satisfaction cutting from 50 to 600 acres, proves it not only strong and serviceable, but also simple and easily managed. It saves not only the hard work of raking, but lays the grain in such good order as to save at least another hand in binding.

It is warranted to be a good, durable Self-Raking Reaper, and I have also succeeded in attaching a mowing bar, so that I also warrant it as a Mower.

Price at Chicago, of Reapers \$170; of Mowing Bar, \$30; Discount on the Reaper, \$5, and on the Mowing Bar, \$10, for cash in advance or on delivery. Price of Mower, \$150.

Pamphlets giving all the objections and difficulties, as well as commendations, sent free, on post-paid applications.

Agents, suitably qualified, wanted in all sections where there are none. J. S. WRIGHT
Jan 25—t Prairie Farmer's Warehouse, Chicago.

CATAWBA GRAPE VINES

ROOTED VINES of three year old, raised by Mr Charles Axt, may be obtained by Addressing D. REDMOND, Feb 55—t Augusta, Ga.

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PURE DEVON AND GRADE CALVES FOR SALE!



ONE very beautiful thorough-bred NORTH DEVON
HEIFER CALF, 5 months old—sire, "Keokuk;" dam,
"Lively Dame"—for pedigrees of which see September
number (1853) *Southern Cultivator*.

Also, a number of grade or half blood heifer and bull CALVES, of
1854, various ages—all from good native cows, and sired by premium
bull "Keokuk," purchased from the Messrs. WAINRIGHT by Judge
WARREN. For particulars, &c., Address D. REDMOND,
Augusta, Ga.
May 55—tf

MADAGASCAR OR LOP-EARED RABBITS!

THE Subscriber, according to promise, made some time since,
when he advertised applicants (through this paper,) that he
could not possibly supply them with Rabbits, till the orders on hand
were filled, would now inform them that he has a few extra pairs of
LOP-EARED RABBITS, of a suitable age for immediate breeding.
They are in fine health and condition. Price \$15 per pair, delivered
at the American Express office in Utica. FRANCIS ROTCH,
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Genuine Peruvian Guano Depot!

FARMERS' PLASTER, CHARCOAL, BONE DUST, MINERAL
PHOSPHATE LIME, SUPER PHOSPHATE LIME, &c
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RAKING REAPER; CIRCULAR SAWS, made by Hoe & Co., and
Welch & Griffith's HORSE POWERS; FAN MILLS, THRESHERS
and SMUT MACHINES. CARMICHAEL & BEAN,
April 55—Cly Augusta, Ga.

1855!

1855!

SOUTHERN CULTIVATOR,

A MONTHLY JOURNAL,

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE

*Horticulture, Stock Breeding, Poultry, Bees, General Farm
Economy, &c., &c.*

Illustrated with Numerous Elegant Engravings.

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Persons who will act as Agents, and obtain Subscribers, will
be furnished with the paper at club prices.

AYRSHIRE HEIFERS FOR SALE

AT \$100 EACH.

HEIFER, "PARAGON," one and a half years old, calved March,
1853; Dam "Princess Mary," grand dam imported "Mary
Queen of Scots;" sire, imported bull "Robert Burns." "Princess
Mary" gave 18 quarts per day, "Mary Queen of Scots" upwards of
30 quarts.

Heifer, "MARIE LOUISE," one and a half years old, calved
March, 1853; dam "Maria Teresa," by imported "Germantown,"
grand dam "Mary Queen of Scots," imported from Scotland; sire,
imported bull "Robert Burns." "Maria Teresa" gave 20 quarts per
day, "Mary Queen of Scots" gave 30 quarts.
Jan 55—tf RICHARD PETERS, Atlanta, Ga.

CHEROKEE!

A VALUABLE LOT OF LAND FOR SALE.

THE subscriber offers for sale a very attractive and valu-
able lot of LAND, situated between three and four miles
from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good up-
land, well adapted to the growth of all the small Grains, Irish
and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and pecu-
liarly suitable for FRUIT-GROWING, as it is situated on an elevated
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of the purest water, occupies the centre of the tract. The margin
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is of great depth and clearness. It is fed by subterranean springs,
and has no perceptible inlet or outlet. The tract is

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The Improvements consist of a very comfortable Log House, with
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The attention of Fruit-Growers, Stock Raisers, and all desir-
ous of a delightful situation in a salubrious and healthy climate,
within easy reach of the best society, is particularly invited to the
above tract.

* For terms, &c., apply to the subscriber, or to Col. J. W. M.
BERRIEN, of Rome, Ga., who will take pleasure in pointing out the
land. D. REDMOND,

September—tf

Augusta, Ga.

SCOTT'S LITTLE GIANT CORN AND COB MILL.

NO. 3, warranted to grind 15 bushels per hour with one horse,
price \$65 all complete, ready to attach the horse. No. 4,
grinds 20 bushels per hour with two horses; price \$75.

CARMICHAEL & BEAN, Agents,
Augusta, Ga.

April 55—Cly

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., JUNE, 1855.

NO. 6.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

ARABLE LAND, AND WATER.

A CORRESPONDENT, writing from Montgomery, Ala., over the signature of B. F. A. desires information as to the nature and effects of capillary attraction in soils; and also the probable influence of the protracted hot, dry weather of last summer on the cultivated lands of the South. As the subject is one of general interest, we deem it not amiss to enlarge upon it, and call public attention to one of the most interesting and useful properties in all soils, without which fruitfulness would be impossible.

If we understand the substance of our friend's first inquiry, it is this: What is the capacity of a fair common soil to draw moisture from the mass of earth beneath, by what is called capillary attraction? This capacity is not a fixed power, or an unvarying function, but depends on the mechanical condition, and porousness of the earth. If it did not partake pretty largely of the character of a sponge, it could not imbibe so much water, and give rise to so many large and durable springs, not to name the unknown quantity only partially revealed by means of common and artesian wells. Although natural springs bring to the surface a prodigious amount of water in the course of twelve months in all parts of the United States, as any one may satisfy himself who will measure the flow of any two or three large springs for a day, yet this quantity is doubtless small in comparison with that which comes up out of the ground through the porous roots, stems, and leaves of living plants and evaporates into the atmosphere. Springs represent not the aggregate of water, that descends into the earth, but probably a little less than the surplus not drawn from the ground by capillary force of vegetation, and the constant vaporization of water from the surface of the naked earth. It is only when rains are small, or few and far between, that this excess of water which finds its way into springs, branches, creeks, rivers and the ocean, is seriously needed for the growth of agricultural plants. Let the common supply of this indispensable element be withheld for a few weeks, not to say months and all thoughtful men naturally regret the loss of water which flows off the surface of fields in damaging torrents, and which cannot sink into the earth either to feed springs or nourish vegetation. We regard the injury done by surface washing, large as it is, as not a tithe of that sustained by the lack in the soil, and in the earth below it, of this very surface water, so much needed to vitalize (so to

speak) every capillary water-course beneath the planter's parched crops. Blood-vessels, whether veins or arteries, no matter how perfectly formed, signify nothing unless the heart supplies the sanguineous fluid; and equally valueless is the nicest possible capillary apparatus at and near the surface of the earth, without water both to ascend and descend through the soil around the roots of plants. Wherever rains fail, irrigation by artificial means is the only known, if not the only possible remedy. Nor do we regard it as wise to wait for a total cessation of rain before any serious effort is made to augment the quantity of water in cultivated land by irrigation. So long as it may be had by digging, boring, and from springs and branches, we should at least count the cost and profit of watering our crops, where water is within reach. In former volumes of this and other agricultural journals, the writer has often commended the great importance of Agricultural Engineering; and pointed out the folly of permitting so much surface water to run off one's plantation. If deep and thorough plowing had nothing more to recommend it than the increased capacity which it imports to the earth of imbibing rain-water, that alone is sufficient to secure its general adoption. But just so certain as the boring through the upper crust of impervious rocks in making an artesian well, gives a new fountain of living water, does the breaking of the upper crust of the subsoil by the plow, allow the capillary fountains below to send up the vivifying liquid and relieve the urgent wants of the cultivator's crops. If his soil is like a bad mince pie, which has a thick upper-crust, and very little meat between, woe to his grain in dry weather, or in *wet*. Such land needs doctoring as much as a sick horse, before it is fit to work. It is constitutionally weak, and otherwise defective, so that the fine particles of sand and clay run together at the first rain after plowing, and *bake* something like sun-burnt brick, in the first few hot days after a "season," or shower. There is a great deal of such land as this in the Southern States; and especially in all districts where the loose earth is derived from rocks *in situ*. We speak understandingly, and after not a little close and extended observation, when we say that Southern planters and Southern institutions are often blamed for evils which are less agricultural or social than geological in their nature. Every part of the land above the sea is not well adapted to tillage nor husbandry. It has natural defects which impair its capillarity, promoting surface washing, and deny agricultural plants alike both mineral and organic food, and water for conveying the same through their vascular and cellular tissues. Wheat, corn and cotton plants have not, like animals, the power of locomotion; their aliment must come to them, enter their porous roots and leaves,

and freely circulate through every living cell, or their growth is impossible.

Having a clear perception of the wants of vegetation, and of the defective capillarity of the soil and subsoil, we come to the consideration of the *ways* and *means* within our reach to prevent the running together of plowed earth, by which it becomes hard, crusty, and largely impervious to air and water. First avoid stirring such soils when wet. The most compact brick are made by simply stirring and mixing pure clay and sand in a moist condition. Solid earthen and stone-ware is prepared by a similar process. All land that inclines to bake in a hot sun ought never to be moved by the implements of tillage when wet. Secondly, give to such land an increased quantity of vegetable mould to mix with the too adhesive clay, separate its particles, and thereby render the mass more porous and friable. Fields long cultivated are more liable to bake than fresh lands, because the organic part, or mould, has been mainly worked out of the former, and not out of the latter. These are facts of great practical significance; and although we have dwelt much upon them in former years, yet it seems to be necessary often to repeat the suggestion that mould is consumed by tillage, and the land nominally worn out. The plow and the hoe must not go over so large a surface. This practice is a lamentable mistake, and one as fundamental as it is common. Thirdly, mould can only be given to a soil that needs it by carting on forest leaves, growing plants on the land expressly to decay and form mould, and by liberal manuring. If Southern notions of planting economy embraced the idea of having well set pastures to be grazed by valuable stock, Nature's economy in grasses, and grass-eating animals, would soon happily ameliorate Southern plantations. A thick covering of grass keeps rain-water long enough on the surface where it falls for most of it to sink into the soil—a point of vast agricultural importance. A carpet of pine straw, or forest leaves, equally tends to prevent washing, and to augment the aggregate of water that penetrates the surface of the earth. But as old-field pines yield little or no income, we propose to change them into good pastures for rearing mules, neat cattle, sheep, swine and the keeping of dairy cows. Suppose one had six large fields, five of which might be ever devoted, in rotation, to stock-husbandry and one summer-fallowed (with peas) to rot the thick sod, freeze the clay, and finely commingle both into a friable loam, before planting corn, or cotton, or seeding with wheat, barley or oats. It is more profitable to till but one large rich field, and till it first-rate, than to cultivate four or five of the same size, which are poor in heart, poorly worked, and yield a miserable return for the labor expended.

Judging humbly from all the lights of modern science, we feel warranted in saying that Providence prepared this planet for the habitation of man by creating long in advance of his advent into the world, both Grasses and Graminivorous animals, by nature adapted to domestication and human service; and that it is our duty to avail ourselves of these means to improve both the soil and mankind. We do not reject other plants than grasses, nor other animals than herbivorous ones, but merely invite attention to the historical facts, that the Camel is so emphatically the servant and companion of man, as not to have existed any where on the globe, in a wild state, during the historical era; while the Elephant, the Ox, the Ass, the Horse, the Sheep, and the Goat, everywhere own Man as their master. An all-wise Creator, not only made man their natural head and protector, but He adapted the food of these useful quadrupeds, and their very droppings, (not to name their flesh, milk, wool, hair and skins,) to the most pressing wants of the human family. It is profitable to revert, occasionally, to first principles, and study Nature's plan for irrigating whole islands and

continents, and clothing them with the most luxuriant herbage. In her plan, one looks in vain for anything like a piece of wood shod with iron, having a mule tied to one end, and a negro holding the other. To idolize such a contrivance, and virtually repudiate all real husbandry, is to overlook one of the grand, primary sources of enduring agricultural prosperity.

Our esteemed Montgomery correspondent writes:—"Our farms look unusually poor and lifeless." Such, too, is the appearance of the arated fields of Hall county, Ga., where this article is written. But little rain has fallen in several months, and much of that little ran off the surface into branches and rivers, leaving many a plantation with scarcely moisture enough to bring up corn, cotton and potatoes; while oats, rye and wheat are suffering badly from drouth.

Although the mean temperature of the spring, summer and autumn of last year were above an average, yet we do not suppose that solar heat injured the soil at the South in an unusual degree, as suggested by the inquiry. But as prolonged dry weather impairs, or destroys vegetation, and increases the nakedness of the land, so that the heat of the sun consolidates it to a greater depth, that circumstance may operate somewhat against farming operations this spring. We have thought the ground appeared uncommonly hard, without ascribing it to any special cause. Frequent rains, in which a half inch of water will be ten hours in falling from the clouds, would soon soften the crust of the earth, and set vegetation all right again. We trust long before this matter meets the eye of the reader, a favorable change in the weather will have taken place, and a generous harvest of wheat and other crops be close at hand.

Where wheat, rye, barley, oats or peas are grown and early harvested, if the land be not seeded, it is miserable economy to allow the ground to lie naked for months to the scorching rays of the sun, say from the middle of June till the middle of October. The nakedness of the land is to be avoided by every practical means; for it tends to lessen its capacity to take in both air and water, and thereby diminishes those important chemical changes which extract the food of plants from rocks, stones, gravel, sand, clay, iron and other minerals. A soil rich enough to bear wheat, will not unfrequently, at the South, yield a fair crop of "crow-foot" or "crab-grass," by merely plowing it soon after the grain is cut. An after-crop of this kind, if allowed to rot on the field, will increase its fertility and lessen its liability to wash; and if cured for hay, it will furnish, *pro tanto*, valuable manure. On really good land, nothing will pay better at the South than to sow grain stubble with corn and peas for forage, having first plowed the ground handsomely. If one has a roller, let it pass over the surface after the seed is harrowed in; especially if the weather is dry.

There is needed far more hay, or a good substitute, in the planting States. After a full supply of food for domestic animals is provided, then greater skill in feeding it, so as to make every pound yield the maximum of nutriment, and at the same time never lose any part of the solid or liquid excrements of the stock that consumes such food. This subject, however, will be discussed at another time.

As the quality and condition of a soil regulate its hygroscopic power, or its capacity of holding water, the reader will see that everything of any practical value in the premises depends on the wisdom or folly of the cultivator. A good friable loam will take up over 40 pounds of water to the cubic foot; so that a hill of corn having 16 square feet allotted to it, might have within 2 feet of the surface, 32 times 40 pounds of water, or 1280 pounds in all. In a porous soil, placed in a large glass tube, water has been seen to rise 18 feet by capillary attraction;

and the water that evaporates from the leaves of forest trees and agricultural plants, doubtless, often rises from a much greater depth, by a similar force or law. We have purposely taken a practical rather than a scientific view of this question. At another time we will look in at the bottom of artesian wells, and see if we can discover where the water comes from. L.

MANAGEMENT OF NEGROES.

EDITORS SOUTHERN CULTIVATOR—As the proper management of our negroes is a subject not second in importance to any discussed in your columns, I hope it will not be deemed amiss if, in giving my views, I enter somewhat into detail. That on some points I shall be found to differ in opinion from some of your readers and correspondents, is to be expected. I shall not, however, object to any one's expressing his dissent, provided it be done in the spirit of kindness.

Our first obligation is undoubtedly to provide them with suitable food and clothing. Here the question arises—what is sufficient food? For, as there is a difference in practice, there must be also in opinion among owners. The most common practice is to allow each hand that labors, whether man, woman or child, (for a boy or girl ten years old or over, who is healthy, and growing rapidly, will eat quite as much as a full-grown man or woman,) 3 1-2 lbs. bacon, if middling, or 4 lbs. if shoulder, per week, and bread at will; or if allowed in this also, a peck of meal is usually thought sufficient. With plenty of vegetables, this allowance is quite sufficient; but if confined to meat and bread, negroes who work hard will eat a peck and a half of meal per week.

As I live on the farm and occasionally inspect the cooking for the negroes, I see that they have enough, but nothing to waste; and I speak from personal observation, when I state that, if without vegetables, they will eat this quantity.

With very little trouble we can always, during spring and summer, have plenty of cabbage, kale or mustard for greens, also squashes, Irish potatoes and beans. In fall and winter, sweet potatoes, turnips, pumpkins and peas, I believe there is no labor devoted to a provision crop, that pays equal to that bestowed on a plain kitchen garden. As there is no vegetable of which negroes are more fond than of the common field pea, it is well to save enough of them in the fall to have them frequently during the spring and summer. They are very nutritious; and if cooked *perfectly done*, and well seasoned with red pepper, are quite healthy. If occasionally a little molasses be added to the allowance, the cost will be but a trifle, while the negro will esteem it as a great luxury. As most persons feel a great reluctance at paying out money for little luxuries for negroes, I would suggest the propriety of sowing a small patch of wheat for their benefit. The time and labor will never be missed. Many persons are in the habit of giving out the allowance to their negroes once a week, and requiring them to do their own cooking. This plan is objectionable on various accounts. Unless better provided for taking care of their provisions than is common among negroes, some will steal the meat from others, and the loser is compelled for the remainder of the week to live on bread, or the master must give him an additional allowance. The master cannot expect full work from one who is but partially fed; while on the other hand, if he will give the loser an additional supply, the negroes soon learn to impose upon his kindness, by being intentionally careless, or by trading off their meat and pretending it has been stolen. Another objection is, that some are improvident, and will get through with their whole allowance of meat before the week is gone, and, consequently, are a part of their time without any.

To making the negroes do their own cooking, the objec-

tions are still more weighty. It encroaches upon the rest they should have, both at noon and at night. The cooking being done in a hurry, is badly done; being usually burnt outside while it is raw within; and, consequently, is unhealthy. However abundant may be the supply of vegetables, the hands have no time to cook them, and consequently are badly fed, and have not the strength to do as much labor as they could otherwise perform with comfort.

The plan pursued by the writer is, to weigh out a certain amount of meat for each day; a portion of which is given to the cook every morning, to be boiled for dinner, and with it are cooked as many vegetables and as much bread as the negroes will eat; all of which is usually divided among them by the Foreman. In the evening, enough is cooked for both supper and breakfast; so that by the time we are done feeding stock, supper is ready, and the hands have only to eat and they are ready for bed. When the nights are long, the meat for supper and breakfast is sometimes divided without cooking. In addition to the above, the negroes, during spring and summer, usually get plenty of milk once a day. During fall and winter, the quantity of milk is more limited, and, what molasses they get, they are made to *win* by picking cotton.

To make one negro cook for all, is a saving of time. If there be but ten hands, and these are allowed two hours at noon, one of which is employed in cooking their dinner, for all purposes of rest that hour had as well be spent in plowing or hoeing; and would be equal to ten hours' work of one hand: whereas the fourth of that time would be sufficient for one to cook for all. As there are usually a number of negro children to take care of, the cook can attend to these, and see that the nurses do their duty. I would add that besides occasional personal inspection, it is made obligatory on the Overseer, frequently to examine the cooking and see that it is properly done.

One of your correspondents has endeavored to prove that lean meat is more nutritious than fat. It is, however, a well known fact that the more exhausting the labor, the fatter the meat which the negro's appetite craves, and it agrees well with him. This I regard as one of the instincts of nature; and think experience is opposed to your correspondent's theory.

As to clothing, less than three suits a year of every day clothes will not keep a negro decent, and many of them require more. Children, particularly boys, are worse than grown persons on their clothes, and, consequently, require more of them. I have never been able to keep a boy, from ten to sixteen years of age, decently clothed with less than four suits a year; nor would that answer, if some of the women were not compelled to do their mending. It is also important that women who work out should in addition to their usual clothing, have a change of *drawers* for winter.

As no article of water-proof, suitable for an outer garment, and sufficiently cheap for plantation use, is to be had in the stores, the writer would suggest the propriety of having for each hand, a long apron with sleeves, made of cotton osnaburgs, and coated with well boiled linseed oil. In the fall, when picking cotton, this apron may be worn early in the morning until the dew dries off, then laid aside. By making it sufficiently loose across the breast, it can be used as an over-coat at any time that the negro is necessarily exposed to rain.

Patching may be done by the women on wet days, when they are compelled to be in the house. Or when a breeding woman gets too heavy to go to the field, she may be made to do a general patching for all the hands.

In furnishing negroes with bed clothes, it is folly to buy the common blankets, such as sell for a dollar or a dollar and a quarter. They have but little warmth or durabil-

ity. One that will cost double the money will do more than four times the service.

Besides whole clothes, negroes should have clean clothes: and in order to do this, they should have a little time allowed them to do their washing. As it is not convenient for all hands to wash at the same time, they may be divided into companies, and a certain evening assigned to each company. Those whose time it is to wash should be let off from the field earlier than the rest of the hands, and on that night should be free from all attention to feeding stock. The rule works equal; for those who have to do extra feeding on one night are in their turn exempt. It should, however, be an invariable rule not to allow any of them to wash on Saturday night, for they will be dirty on the Sabbath, and render as an excuse that their clothes are wet. On some large plantations, it is the daily business of one hand to wash and mend for the rest.

In building houses for negroes, it is important to set them well up, (say 2 1-2 or 3 feet from the ground to the sills) so as to be conveniently swept underneath. When thus elevated, if there should be any filth under them, the master or overseer, in passing can see it, and have it removed. The houses should be neat and comfortable; and as far as circumstances will allow, it looks best to have them of uniform size and appearance; 16 by 18 feet is a convenient size for a small family. If there be many children in a family a larger house will be necessary.

Many persons, in building negro houses, in order to get clay convenient for filling the hearth, and for mortar, dig a hole under the floor. As such excavations uniformly become a common receptacle for filth, which generates disease, they should, by no means, be allowed. In soils where the clay will make brick, the saving of fuel, and the greater security against fire, render it a matter of economy to build brick chimneys. In all cases, the chimneys should be extended fully two feet above the roof, that there may be less danger in discharging sparks. They are also less liable to smoke. In consequence of negro houses being but one story high, the lowness of the chimneys renders them very liable to smoke from currents of wind driving down the flue. This may be effectually prevented by the following simple precaution: Around the top of the chimney throw out a base some 8 or 10 inches wide, and from the outer edge of this draw in the cap at an angle of 35 or 40 degrees with the horizon, until true with the flue. No matter in what direction the wind blows, on striking this inclined plain the current will glance upwards and pass the chimney, without the possibility of blowing down it. On page 454 of Reports of Commissioner of Patents for 1844, will be found plates illustrative of my meaning. The wings of the angles, as explained in the Reports, are, however, unnecessary, as the remedy is effectual without them, though they evidently increase the draft. A coat of white-wash, inside and out, every summer, adds very much to the neat and comfortable appearance of the buildings, and is also, by its cleansing and purifying effect, conducive to health. The cost is almost nothing, as one barrel of good lime will whitewash a dozen common-sized negro houses, and any negro can put it on.

If there be not natural shades sufficient to keep the houses comfortable, a row of Mulberries, or such other shades as may suit the owner's fancy, should, by all means, be planted in front, and so as to protect the houses on the south and southwest.

The negroes should be required to keep their houses and yards clean; and in case of neglect should receive such punishment as will be likely to insure more cleanly habits in future.

In no case should two families be allowed to occupy the same house. The crowding a number into one house is unhealthy. It breeds contention; is destructive of deli-

cacy of feeling, and it promotes immorality between the sexes.

In addition to their dwellings, where there are a number of negroes, they should be provided with a suitable number of properly located water closets. These may contribute an income much greater than their cost, by enabling the owner to prepare poudrette; while they serve the much more important purpose of cultivating feelings of delicacy.

There should, at all times, be plenty of wood hauled. Surely no man of any pretensions to humanity, would require a negro, after having done a heavy day's work, to toil for a quarter or a half mile under a load of wood before he can have a fire. An economical way of supplying them with wood is to haul logs instead of small wood. This may be most conveniently done with a cart and pair of hooks, such as are used for hauling stocks to a saw-mill. Such hooks will often come in use, and the greater convenience and expedition of hooks instead of a chain, will soon save more time than will pay for them.

The master should never establish any regulation among his slaves until he is fully convinced of its propriety and equity. Being thus convinced, and having issued his orders, implicit obedience should be required and rigidly enforced. Firmness of manner, and promptness to enforce obedience, will save much trouble, and be the means of avoiding the necessity for much whipping. The negro should feel that his master is his law-giver and judge; and yet is his protector and friend, but so far above him, as never to be approached save in the most respectful manner. That where he has just cause, he may, with due deference, approach his master and lay before him his troubles and complaints; but not on false pretences or trivial occasions. If the master be a tyrant, his negroes may be so much embarrassed by his presence as to be incapable of doing their work properly when he is near.

It is expected that servants should rise early enough to be at work by the time it is light. In sections of country that are sickly it will be found conducive to health in the fall, to make the hands eat their breakfast before going into the dew. In winter, as the days are short and nights long, it will be no encroachment upon their necessary rest to make them eat breakfast before daylight. One properly taken care of, and supplied with good tools, is certainly able to do more work than under other circumstances. While at work they should be brisk. If one is called to you, or sent from you, and he does not move briskly, chastise him at once. If this does not answer, repeat the dose and double the quantity. When at work I have no objection to their whistling or singing some lively tune, but no *drawing* tunes are allowed in the field, for their motions are almost certain to keep time with the music.

In winter a hand may be pressed all day, but not so in summer. In the first of the spring a hand need not be allowed any more time at noon than is sufficient to eat. As the days get longer and warmer, a longer rest is necessary. In May, from one and a half to two hours; in June, two and a half; in July and August, three hours rest at noon. If the day is unusually sultry, a longer time is better. When the weather is oppressive, it is best for all hands to take a nap at noon. It is refreshing, and they are better able to stand pressing, the balance of the day. Hands, by being kept out of the sun during the hottest of the day have better health, and can do more work through the season than those who take what they call a good steady gait, and work regularly from morning till night. They will certainly last much longer.

If the corn for feeding is in the shuck, the husking should be done at noon; and all corn for milling should,

during summer, be shelled at noon, that as the nights are short the hands may be ready for bed at an early hour.

If water be not convenient in the field where the hands are at work, instead of having it brought from a distance in buckets it will be found more convenient to have a barrel fixed on wheels and carried full of water to some convenient place, and let a small boy or girl, with a bucket, supply the hands from the barrel. Some persons make each negro carry a jug or large gourd full of water to the field every morning and this has to serve for the day.

During fall and winter, hands may be made to pack at night what cotton has been ginned in the day. The women may be required to spin what little roving will be necessary for plow lines, and to make some heavy bed quilts for themselves. Besides this there is very little that can properly be done of nights.

One of the most important regulations on a farm is to see that the hands get plenty of sleep. They are thoughtless, and, if allowed to do so, will sit up late of nights. Some of them will be up at all hours and others instead of going to bed will sit on a stool or chair and nod or sleep till morning. By half-past nine or ten o'clock, all hands should be in bed, and unless in case of sickness or where a woman has been up with her child, if any one is caught out of bed after that hour, they should be punished.

A large-sized cow-bell that could be heard two miles, and would not cost more than three or four dollars, would serve not only as a signal for bed-time, but also for getting up of a morning, for ceasing work at noon and resuming it after dinner. Where the distance to be heard is not great, a common bar of cast steel hung up by passing a wire through one end, may be struck with a hammer; and will answer in place of a bell.

Most persons allow their negroes to cultivate a small crop of their own. For a number of reasons the plan is a bad one. It is next to impossible to keep them from working their crops on Sabbaths. They labor of nights when they should be at rest. There is no saving more than to give them the same amount, for like all other animals he is only capable of doing a certain amount of labor without injury. To this point he may be worked at his regular task, and any labor beyond this is an injury to both master and slave. They will pilfer to add to what corn or cotton they may have made. If they sell their crop and trade for themselves they are apt to be cheated out of a good portion of their labor. They will have many things in their possession under color of purchase which we know not whether they obtained honestly. As far as possible it is best to place temptation out of their reach. We have all their time and service, and can surely afford to furnish them with such things as they ought to have. Let us spend on them in extra presents as much as their crop (if they had one) would yield. By this means we may keep them from whiskey and supply them with articles of service to a much greater extent than they would get if allowed to trade for themselves, while we avoid the objections above stated.

Believing that the strolling about of negroes for a week at a time during what are called Christmas Holidays, is productive of much evil, the writer has set his face against the custom. Christmas is observed as a Sacred Festival. On that day as good a dinner as the plantation will afford is served for the negroes, and they all sit down to a common table, but the next day we go to work. From considerations both of morality and needful rest and recreation to the negro, I much prefer giving a week in July, when the crop is laid by, to giving three days at Christmas.

On small farms where there are very few negroes, it may be proper to allow them to visit to a limited extent, but on large plantations there can be no want of society,

and consequently no excuse for visiting except among themselves. If allowed to run about, they will rarely ever take wives at home. The men wish an excuse for absence, that under pretext of being at their wife's house, they may run about all over the neighborhood. Let it be a settled principle that men and their wives must live together. That if they cannot be suited at home they must live single, and there will be no further difficulty. If a master has a servant and no suitable one of the other sex for a companion, he had better give an extra price for such an one as his would be willing to marry, than to have one man owning the husband and another the wife. It frequently happens where husband and wife belong to different persons that one owner sells out and wishes to move. Neither is willing to part with his servant, or if one will consent, the other is not able to buy; consequently, the husband and wife must part. This is a sore evil, surely much greater than restricting to the plantation in making a selection.

In the infliction of punishment, it should ever be borne in mind that the object is *correction*. If the negro is humble and appears duly sensible of the impropriety of his conduct, a very moderate chastisement will answer better than a severe one. If, however, he is stubborn or impertinent or perseveres in what you *know* to be a falsehood, a slight punishment will only make bad worse. The negro should, however, see from your cool, yet determined manner, that it is not in consequence of your excited temper, but of his fault, and for his correction that he is punished. As a general principle the legal maxim that "it is better ninety and nine guilty persons should escape than one innocent should suffer," is correct. It, however, has its exceptions. If, for instance, the negroes take to killing your pigs or stealing your chickens and eggs, and you cannot ascertain who are guilty, it is only necessary to put the whole "crowd" on half allowance of meat for a few days and the evil will end. This remedy is better than a perpetual fuss and suspicion of all.

In the intercourse of negroes among themselves, no quarreling nor opprobrious epithets, no swearing nor obscene language, should ever be allowed. Children should be required to be respectful to those who are grown, more especially to the old, and the strong should never be allowed to impose on the weak. Men should be taught that it is disgraceful to abuse or impose on the weaker sex, and if a man should so far forget and disgrace himself as to strike a woman, the women should be made to give him the hickory and ride him on a rail. The wife, however, should never be required to strike her husband, for fear of its unhappy influences over their future respect for and kindness to each other.

The negroes should not be allowed to run about over the neighborhood; they should be encouraged to attend church, when it is within convenient distance. Where there are pious negroes on a plantation who are so disposed, they should be allowed and encouraged to hold prayer-meetings among themselves; and where the number is too great to be accommodated in one of the negro houses, they should have a separate building for the purposes of worship. Where it can be done, the services of a Minister should be procured for their special benefit. By having the appointments for preaching at noon, during summer, and at night during winter, the preacher could consult his own convenience as to the day of the week, without, in the least, interfering with the duties of the farm.

A word to those who think and care but little about their own soul or the soul of the negro, and yet desire a good reputation for their children. Children are fond of the company of negroes, not only because the deference shown them makes them feel perfectly at ease, but the subjects of conversation are on a level with their capacity,

while the simple tales, and the witch and ghost stories so common among negroes, excite the young imagination and enlist the feelings. If in this association the child becomes familiar with indelicate, vulgar, and lascivious manners and conversation, an impression is made upon the mind and heart, which lasts for years—perhaps for life. Could we, in all cases, trace effects to their real causes, I doubt not but many young men and women of respectable parentage and bright prospects who have made shipwreck of all their earthly hopes, have been led to the fatal step by the seeds of corruption, which, in the days of childhood and youth, were sown in their hearts by the indelicate and lascivious manners and conversation of their father's negroes. If this opinion be correct, an effort to cherish and cultivate the feelings and habits of delicacy and morality among our negroes is forcibly urged upon us by a regard for the respectability of our children, to say nothing of the prospects of both child and servant in another world, and of our own responsibility when the great Master shall require an account of our stewardship.

I have given you, Messrs. Editors, an outline of my own management. If any of your correspondents will point out a more excellent way, he will benefit your readers, and much oblige your friend,

AGRICOLA.



QUEEN BEE.



WORKING BEE.

BEE KEEPING.

EDITORS SOUTHERN CULTIVATOR—If I have shown any enthusiasm on the subject of bee keeping, it was because I felt I was engaged in a good cause, actuated by the same impulses that thrill the bosom of a patriot when he mounts the stump for his country's good; with this difference, however, that I have gone a little further, desiring that the people should have all that he contends for, with the addition of plenty of honey to boot. It has been a matter of wonder with me, how farmers, otherwise wide awake to their own interests, should be so blinded as to be without this useful insect; for in whatever light you may consider it, as a healthful article of domestic economy, honey has not its superior; nor will it be necessary to allude to any of the many uses to which it may be applied by the frugal house wife; but as an article of commerce, I would refer to it, and ask, why are we indebted to distant countries for a thing that we can so successfully make at home? The answer is to be found in the unwise determination of the most of those who keep bees in adhering to old customs. Some of these contend that the only good management is to set the *gum* in some out-of-the-way place, if under the shade of a peach tree, all the better—others must place their hives on the ground, and as much exposed to the rays of the burning sun as possible—then there are those who cannot be prevailed on to have a hive less than two feet deep, and these must be placed in some obscure fence corner, propped with a fence rail or two to guard against blowing over—then again we have those who reject all protection to the hive, believing with Dr. Eddy that an exposure to all sorts of weather prevents an attack from the bee moth. Thus, Messrs. Editors, from the beating of tin pans in swarming season, to the lighting of rags and torches preparatory to robbing the hive, every operation is directed with such carelessness that a total loss is the

consequence, and then you hear the common cry, "I can't keep bees, the moth destroys them." These gentlemen will allow me to say that the injuries their hives sustain from the bee moth, could be, in a great measure, prevented, if they would adopt a better system of management. I once knew a man who had very peculiar views about the application of manures; he would haul out a large number of loads which he would distribute all over his fields in little heaps, giving them pretty much such an appearance as you might expect to see were they suffering under a violent attack of small pox; and after these had remained sufficiently long to lose every valuable property, he would apply it to his crops, and in the end complain that the manure was good for nothing—I saw another put out a row of trees, but which really looked more like a mimic telegraph line than anything else I can think of, (for they were nothing more than a row of poles) and this same man complained that one-half of his trees died. Now, had both of these men done their work properly, there would have been no failure. So in the management of bees, if you think all you have to do is to live them, and afterwards let them take care of themselves, you will find that you have made a miscalculation. Your hive, as I have before said, must be of a proper size, viz: twelve inches in the clear—it must be made of good lumber, and well painted, and when you put in your bees let them be good swarms, these you will place under a shelter, and you will have made a good commencement.

As to the style of hive to be used, that is altogether a matter of taste. MINER'S cross-bar is certainly the best; after that, the chamber and common box-hive, will answer very well. (See MINER'S Manual for a description of the different hives.) After the bee keeper has made a good commencement, let him pay every attention to the wants of his bees, by often going to them, to "brush away the cobwebs that sometimes annoy them," and remove all dead bees, bits of wax, &c., as may collect about the hive; in a word, let every thing in the Apiary be kept clean, and you will be pleased to see how successful you will be. If, at the distance of some thirty or forty yards from your bee-house, you hear a sound not unlike that of a train afar off, you may be sure your bees are doing well; or, if while walking in your garden, the sound of their wings over your head, as they pass to and from their hives, brings to your imagination the poetical idea connected with the "music of the spheres," it may be taken as evidence that your Apiary is in a prosperous condition.

It is in the commencement of bee keeping that you have to exercise a great deal of caution. If possible procure none but well filled hives, and these you must be careful to place at some distance from where your Apiary is to stand. After they have swarmed, and your bees housed in your new hives, drive the bees from the old into good hives, and burn the old. The operation of driving is quite simple. Turn the old hive upside down, place the new one on top, wind a piece of cloth around to stop the joint, and then rap the bottom hive pretty soundly for some ten or fifteen minutes, which will cause the bees to ascend in the new hive. If they show any unwillingness to go up, blow in a little tobacco smoke below them, and you will have no further trouble.

As regards the shelter for your hives, that, again, is a matter of taste. I use, and would always recommend, a house, which need not be more than five or six feet in width, and as long as you may require, but let it be well shingled. Under this, place your hives at some two feet apart, and if you can have a separate stand for each hive it will be all the better, as the bees will lose much time with visiting and idle gossip, when the hives stand too close together.

Now, a word or two on that most interesting of all sea-

sons, swarming—bees swarming! What a thrill of pleasure these two words send to the bosom of the enthusiastic bee-keeper. To approach your Apiary and hear the hum of thousands of bees as they come pouring from the hive—to see them darting through the air, and finally cluster on the branch around their loving queen—to watch them, like a living stream, running into the hive your fostering care has offered them, are but a few of the pleasing incidents connected with the issuing and hiving of a swarm of bees. Sometimes, in the course of your experience, you will find your swarms to come out with every appearance of doing well, and after making an unsuccessful attempt at clustering, return to the hive. I would advise the bee-keeper when this happens to examine in the neighborhood of the Apiary, and he will be apt to find the queen, unable to fly from some injury she has sustained in the hive. The best course to pursue in the premises is to destroy her, and let them proceed to rear another, which they will do in a short time.

When your bees swarm make no fuss. All beating of tin-pans, horse-shoes and triangles is quite useless. Do nothing more than spread a sheet directly under the bulk, upon this place your hive, raising it some four or five inches in front to allow the bees to pass under, then taking hold of the branch give it a sudden jar, and you have done all that you can do, except to give them an occasional brushing to prevent them from crowding on the outside of the hive, which they are apt to do if the weather is very warm; on this account, too, it is sometimes necessary to shade the hive. If your bees cluster on the body of the tree you will have to brush them off. Never sprinkle your bees, except in very hot weather, and then only when they show any reluctance in entering the hive. Remove the hive to its place as soon as the bees have become quiet. For much useful information on this branch of the subject I would again refer the reader to Miner's Manual.

Trusting that these few hints may subserve a good purpose, I indulge the hope that the day is near at hand when no farm will be without its Apiary.

Respectfully, V. LA TASTE.
Cedar-Green, near Augusta, May, 1855.

POD-BEARING VEGETABLES.

PROFESSOR BURGER, (high German authority) in his "Economy of Farming" thus commends the cultivation of pod-bearing vegetables: "The pod-bearing vegetables generally need less manure than plants of the grass kind; for in a given soil, and in a given time, they produce more organic matter than do the latter; because they absorb a greater quantity of *atmospheric* and *mineral* substances. Plants can take so much the more moisture from the air as the surface of their leaves is collectively greater, or as they have more absorbing vessels, or hair upon their surface. They dry less easily the thicker their leaves are, and the moisture shut up between them is more slimy, or viscous; and if the plants are connected with many thick or strongly haired leaves, and roots pressing deep into the soil, they all must draw a great part of their nourishment from the air, and resist dryness. Pod-bearing plants have these properties in a higher degree than the grasses."

Our learned author describes peas, beans and lentils as having comparatively small roots; while he speaks in high praise of lucerne, and white lupins, (*Lupinus albus*, white horse bean,) as making a "luxuriant growth in a poor and light soil, by means of their long tapering roots,

and many large, thick and heavy leaves," which protect the plants from drying. Cactuses are remarkable for collecting and retaining moisture in a soil and atmosphere so arid as to wither and kill most other plants. Lucerne being perennial, and lasting many years, really deserves general culture at the South. We have seen nothing this spring in Georgia that looked finer or promised better than a patch of Lucerne in a garden in Athens, owned by a gentleman who was born and reared in England. He gets five cuttings in a year; and we venture to suggest that if he would irrigate the plants immediately after each cutting, he might have seven in place of five, and a weightier yield at each. One hundred tons, of 2,240 pounds each, have been cut off a single acre, in eight months, of Italian rye grass, in England, by the aid of liquified manure. We have no faith in the growth of large crops of any kind on poor land, without both water and manure. Nevertheless, some plants do much better than others on a short allowance of manure and water; and from the time of Esau, who sold his birth-right for a mess of lentils, or "pottage," to the present hour, the pod-bearing vegetables have fed more people than the cereals, in the Old World. The great armies of antiquity subsisted mainly on beans, peas, and other leguminosæ; and the weight carried by a Roman soldier attest at once the muscle and bone-sustaining elements in his daily food, and the justice of that popular and profound regard for his fabian aliment.

THAER, VEIT, KORTE and BURGER, the four highest German authorities, concur in stating that the pod-bearing plants exhaust the soil less than any others. Prof. KORTE says: "Annual pod-bearing plants with small roots, if they are mown before the formation of the seeds, may be regarded as equal to perennials for forage in the smallness of their tax upon the soil." L.

PLOWING IN TIME OF DROUGHT, PHILOSOPHICALLY CONSIDERED.

EDITORS SOUTHERN CULTIVATOR—It is possible for a person of limited experience to throw out some suggestions, that may be of advantage to others in the very department that is the business of the latter. If my remarks should be deemed worthy a place in your paper, I trust they will be allowed to appear. They will probably be too late to benefit any one during the present drouth but, if they are based on sound philosophy, they will always be of use.

I believe there are few cultivators of the soil who would now question the impropriety of plowing a crop during an excessive drouth. But I have not yet heard any one assign, as the ground of his opinion, anything but his own experience and observation. Now, nothing can be better than the experience and observation of intelligent men. Even those, however, can be made more worthy the confidence of others, if they can see the reasonableness of what is affirmed, notwithstanding their own observation may not reach so far.

It seems to me that the true reason why the ground should not be plowed while vegetation is suffering from lack of moisture, is, that, by breaking the crust of the surface, we remove an impediment that was checking, in some measure, the evaporation of the moisture below—we perform in the field what the chemist does in his laboratory whenever a pellicle forms on the surface of a solution that is to be evaporated to dryness. The chemist breaks it up, and so allows the vapor to escape more readily. Now, if I am right in this, it would be injudicious to break the surface to the depth of the moisture below, even though the earth were not turned over at all. But as any form of plow will, in some degree, mix the upper and lower soil, or the more and less dry portions, so the drying process is still further promoted.

It appears to me that, at such a time as the present, much

is at stake in the course to be pursued. We have had the driest winter after a dry fall and dry summer. The earth has stored up but little moisture, and cannot afford to have it wasted. If we could anticipate a rain, no wiser course could be pursued than to break the surface beforehand, that more of what falls may penetrate and less may evaporate. In the absence of all sign of rain it would be presumption to expect it soon.

My own course is, not to allow a plow to enter my fields. My neighbors are going on in their usual way. The extraordinary season does not suggest to them a departure from the ordinary mode of culture. Our corn is now of about equal size, (say 4 or 5 inches high,) so that we can compare results. And if there is any marked difference in favor of either, I will communicate with you. I ought to state, however, that after one of my fields was thoroughly subsoiled I was so fortunate as to have one fine rain. This will give that field a decided advantage. The rest of my land was not subsoiled at all. J.

Alabama, April, 1855.

NOTE.—It might be supposed, by those not acquainted with vegetable philosophy, that the moisture contributed to the atmosphere, by promoting evaporation from the soil, compensates the loss sustained by the soil. The structure of plants is such, however, that it is manifestly not an indifferent matter whether the moisture is applied to the leaves or the roots. The stomata of leaves, which enable the plant to regulate the evaporation of its own moisture, are so contrived as to open with an increase of moisture in the plant and to close with a diminution of it. And the effect is the same whether the moisture is within the plant, or externally applied to the leaves.

Any one who has a good microscope may test this by actual experiment. And those who have not such an instrument need but call to mind what they cannot but have observed (particularly in the case of the paper mulberry), that in a great drouth, one light sprinkle of rain, enough to moisten the leaves without reaching the roots, will do more injury than service. The stomata open and moisture escapes more rapidly, while it is not supplied at the roots in the same proportion. Similar is the effect of bringing about this disproportion between the moisture of the air and that of the soil, by promoting evaporation from the latter. True a moist atmosphere opposes an impediment to evaporation. But it will be evident that this is not to be done at the expense of the very moisture that we aim at preserving. J.

REMARKS.—The theory of our respected correspondent is directly at variance with the practice and teachings of our most distinguished agriculturists; nearly all of whom contend that the oftener the earth is stirred, and the more finely its parts are pulverized, in dry weather, the greater the amount of moisture it will attract from the atmosphere, which always contains a quantity varying only in degree. That plants are generally much benefited by a judicious stirring and thorough pulverization of the earth around their roots, we know from long experience; but that they may be greatly injured by improper exposure and rupture, in plowing or hoeing, during a long drouth, we also know as well. The question for us to decide in reference to the theory of our correspondent is, whether the amount of moisture evaporated from finely pulverized earth, during a drouth, is greater or less than that which the same earth absorbs from the night dews, vapors, &c., in a given time. We shall be glad to hear the further experience of "J." and all our practical and observing readers on this highly important subject.—Eps. So. CULT.

BOTS IN HORSES—ONCE MORE.

EDITORS SOUTHERN CULTIVATOR—I am apprehensive that the discussion of this subject which has already occupied your columns may be uninteresting to many, and hence I am somewhat reluctant again to address you. On reflection, however, I know of no more useful theme for the farmers of our country than the Diseases and Treatment of Horses. Without these and the patient mule, Agriculture would be valueless, emasculated of all its virtue and worth. I shall here present but few of my own speculations on this subject, having given them already *in extenso*; but think I can satisfy the most sceptical by the adduction of standard authorities, (acknowledged beyond dispute as the best and most scientific in the world on Veterinary science,) as "high as Olympus;" or as "Ossa on Pelion"—if you choose—which establish every particular of any moment in my articles of the November, 1853, and September, 1854, numbers of your valuable paper.

I am obliged to J. A. T. for the tone of his article. If there be any pleasure in a paper discussion of any kind, (which I have never felt, however,) it is only with fair and courteous opponents. Any other, even in the political arena, is not worthy of the lance of a true knight. It is an honor sometimes to be vanquished, if the cause be just, and the *motive* be disinterested or benevolent.

I think, between us, there is but a penumbra of difference in our opinions on the subject; for he says: "*there is no remedy for this disease, known as a specific.*" We coincide here precisely. He recommends the "greasing of the nit or fly once or twice a week during the fly season, to prevent their hatching, which is the only state (he conceives) in which the bot can be managed." This, too, is unobjectionable, certes, because innocuous—*may* be beneficial, but cannot be injurious—and with many would serve to negative the idea of the "bot sickness," if the horse should, perchance, at any time get sick, and consequently contravene any necessity for the use of the terrible drugs and compounds, so often and recklessly resorted to. To this suggestion, therefore, and for the purpose above, I would not interpose a nay, but rather say, "so let it be." My object as first stated in my first article, was to intercede for our most useful and faithful ally (the horse) in persuading some of your numerous readers to "stay their medicines and drugs," and thus have no participation in resorting to such drastic poisons, called "bot remedies," as unquestionably torture and destroy instead of relieving the patient.

Another correspondent who has complacently clapped a "refutation" on your "reputation," (or the little office-imps, called a "Printers Devil," and you must decide which, between you) also coincides with me precisely. For he says: "*never indulge the sanguine hope that you can drench and kill the bots and not endanger the horse; the idea is erroneous.*" And the reputed infallible remedies, such as sage tea, mullen, fish brine, molasses and persimmon, &c., &c., I endorse none of them, but reject the idea of *drenching at all*, except in extreme cases. In lieu of which I bleed in the mouth freely, &c., and adds: "always keep *salt* in your troughs and you will never hear of bots."

Here again you perceive it would be splitting hairs, "twixt North and North-west side," to make up an issue between us. The bleeding in the mouth, is harmless and beneficial in most ailments; and to the latter advice I subscribe in toto, as a remedy for many more ills than bots which "horse-flesh is heir to." I attribute my good fortune with horses in a great measure to this uniform practice, adding a little fine sifted ashes to the salt. But when this correspondent indirectly subscribes to the "talking, rubbing and slapping" process, as remedies, I can only reply "Credat Judæus appella"—i. e., tell it to the marines!

Bots of the 19th century don't believe in "Will o' the Whispers!" They are genuine "hard shells," being deaf, blind and insensible to any such "moral suasion," or influences of the "Tommy-come-tickle-me" order.

Another writer in your paper (W.F.P., I think) maintains that bots *will* kill horses, because "they *will* and do kill cattle by eating through the skin into the loin and along the sides of the back-bone," &c.; and asks W.F.P. "why it is so?" and concludes (a non-sequitur, by the bye) that the bot that is in the horse and in the cow's back, are *identical*." Your correspondent is both right and wrong, I humbly affirm; relatively in homœopathic and allopathic proportions, however. There are several kinds of the *Cæstrus*, among them the *Cæstrus cuticolens*, differing in many particulars from *Cæstrusequi*. They are often found under the skin of the cow, and sometimes of the horse also in some latitudes, but is, by no means, "*identical*" with that which is found in the stomach of the horse. Whether they ever kill cattle deponent saith not, but I doubt it. They are more nearly "*identical*" with what are commonly called "wolves" in cattle. These never kill horses and are easily removed.

I have thus answered, I trust, such inquiries as I could, without lengthening this article too much. I fear I have already taken up too much of your columns; and will now proceed to give you the opinions of such authors as *must, or ought to be, conclusive*, and which embrace all that may appropriately be said to support my positions before published.

Dr. DADD, (Vet. Sur.), in a work recently issued, (*The Modern Horse Doctor*) maintains "That bots, generally speaking, are not so troublesome to horses as people think, for it is very rare in making post mortem examinations, that we do not find more or less of them in the stomach. *We have heard wonderful stories*" (and who has not, who has read your *Cultivator*, Messrs. Editors?) "*related of the bot burrowing through the walls of the stomach. This we deny in toto, at least while the horse is alive.*" The little creature is too comfortably located to attempt its exit into a cavity where its destruction would be inevitable. If it be about to vacate its stronghold, instinct teaches it the most safe and expeditious route, which is the alimentary canal."

"We do not deny that bots are found in the abdominal cavity, for the moment the horse dies the various organs are subject, for the most part, to the laws of decomposition. Chemical action, which, during life, was regulated by the vital forces, now assumes supremacy. *Those powerful solvents, termed the gastric fluids, which had previously dissolved nothing but food, now act on the stomach itself and hasten its decomposition, and what had previously been good food for bots now become their bane, and they must themselves, in turn, be destroyed unless they escape from it.*" The peristaltic motion of the alimentary canal, which, during the existence of the horse, was so favorable to their exit, by this channel, has ceased. They are too well acquainted with this intricate, labyrinthian outlet (the usual route) to attempt its passage. No, the same energies of the eternal mind

"Pervading and instructing all that live,"

suggests the only mode of escape. *The stomach now offering but little opposition to them, being partly decomposed, they burst their prison-house, and hence are found in the stomach.*" Hence the "riddled" intestines, so often alluded to. I hope the above may be particularly noticed, as it satisfactorily explains and removes a very popular error, far better than I have already been able to do.

But again Dr. DADD says: "We are frequently called on to visit sick horses said to have bots, when there is no more connection between them and the disease, than there is between the horse and the awl on which his shoes were forged. It is all very well to say 'the horse has the bots,'

and present some medicine for their expulsion, but there is no practical advantage gained; neither is the horse benefited by such treatment; for most of the vermifuges would kill the horse, while the former would not be injured in the slightest degree."

The above, sirs, are precisely the opinions addressed to you in my former articles. I can surely say that I am fortified by excellent authority in the learned gentleman quoted above.

But again; Mr. BRACY CLARK (who has examined this subject more closely than any other man perhaps) says: "The slowness of the growth of the bots and the purity of the food, which is *probably the chyle*, must occasion what they receive in a given time to be proportionably small; from which, perhaps, arises the *extreme difficulty of destroying them by any medicine or poison thrown into the stomach.* After opium had been administered to a horse laboring under lock-jaw for a week, in doses of 1 oz. every day, bots were found in the stomach perfectly alive. Tobacco has been employed in much larger quantities in the complaint and has also been continued without destroying them."

Mr. WHITE (another Vet. Sur.) also says: "While making experiments on Glanders, I found *living bots in the stomach of a horse, though he had been taking for many days arsenic and corrosive sublimate.*"

Mr. BLAIN, (Vet. Sur.) also, says: "That he has kept them (bots) for days in olive oil, and in oil of turpentine, and that even the nitrous and sulphuric acids do not immediately kill them."

"It has been remarked that *no effectual remedy for bots has been ever discovered.* Yet in nine cases out of ten, if the animal be permitted to run a short time at grass, when the bot has attained its full growth, and is capable of exercising an independent life it will detach itself from the stomach and pass off with the excrement." As I have before written and maintained in the *Southern Cultivator*.

The author of Hippopathology (one of the very best works extant) says: "It has been conjectured that bots might prove *semicecæ* to the animal by aiding the cuticular coat in the trituration of their food. That nature should have created an animal, and designed it as an inhabitant of the stomach of another animal without some good, is, I think, highly improbable and irreconcilable with her beautiful and more readily explained operations. I am, however, unable to draw the curtain which is here interposed between fact and design. Supposing the bots in some way or other do good rather than hurt, surely we cannot be solicitous about removing them; for though we are unable to demonstrate the beneficial influence, we may from all the circumstances arrived at, at least assert that they, in general, are not injurious. Howbeit we can't persuade the world so, and therefore we must be prepared to meet the complaints of persons who come to us, at certain seasons, and say that *their horse has worms*," which must be got rid of, with a remedy for the purpose. *Should any other malady exist at the time, no matter what, the origin will commonly be traced to the presence of these mischievous vermin.* As far as our experience goes we have no faith in medicine to expel bots," &c. This writer, you perceive, goes "all fours" with me, in every particular; and there cannot be produced a better authority than this work on Veterinary science.

Dr. CLARK, (another Vet. Sur.) reasons thus: "We can, it is true, force medicine down a horse's throat, but we cannot afterwards get it into the throat of the bot, who is placed in his own element, and can repulse the food that does not suit him."

Dr. DADD (Vet. Sur.) further says: "Foreign bodies are sometimes found in the stomachs of horses after death which do not seem to occasion much inconvenience during life; thus many hundred bots have been found within

the cavity without the subject being at all inconvenienced by them."

An old number of the *Medical Register* (an extract of which is before me) treats of the "bot remedies," which had become "quite extensively popularized through the use and recommendations of empirical pretenders to veterinary skill," and, repudiating them all, says: "In some instances the bot, even when exposed to the most concentrated and intensified action, remains wholly unaffected, or at most, only slightly injured."

Among other experiments, the following may be enumerated to attest their extraordinary tenacity of life: "Of three of these insects (two of which were small and one of mature size) immersed in corrosive sublimate, the first two only were destroyed. Six hours after immersion the mature, or full grown insect, was removed from the fluid without exhibiting even the slightest apparent diminution of its normal activity or sprightliness and to all appearances, unharmed. Immersed in rum, they lived 10 hours; in a decoction of Tobacco, 11 hours; strong elixir of vitriol, 2 hours and 18 minutes; essential oil of mint, 2 hours and 5 minutes, &c. The following articles produced, no effect: decoction of pink root, fish oil, brine, solution of indigo, linseed oil, elixir camphor, though immersed in each 10-hours." I purposely enumerate the liquids used for 10 hours, because each, I think, has been published by some one in your paper as a "bot remedy." Now, sirs, are not the above experiments and extracts sufficient to satisfy the most sceptical of the impracticability of killing the bot? or the necessity of "doctoring" for them at all?

But further, I will conclude this array of authorities by extracting a few lines from the "History of the Horse," an excellent work, published by the London Society for the Promotion of Useful Knowledge; at the head of which was the great sava, Lord BROUGHAM, and composed, as Mr. SKINNER says, "of men of the highest repute in the various departments of learning and industry." This work, after discussing the history and idiosyncrasy of the *Oestrus equi*, or bots, says: "Grooms are sometimes alarmed at the appearance of these insects. Their history is curious and will dispel every fear with regard to them," &c., and adds: "There are several (among other) conclusions from their history." (Now, note them well, Messrs. Editors, if you please; as this subject is not an altogether unimportant one, to a large class of your subscribers): "The bots cannot, while they inhabit the stomach of the horse, give the animal any pain, for they are fastened to the cuticular and insensible coat."

"They cannot be injurious to the horse, for he enjoys the most perfect health, when the cuticular part of the stomach is filled with them, and their presence is not even suspected until they appear at the anus."

"They cannot be removed by medicine, because they are not in that part of the stomach to which medicine is usually conveyed; and if they were, their mouth are too deeply imbedded in the mucus for any medicine that can safely be administered to reach them; and last of all, in due course of time, they detach themselves and pass away. Therefore, the wise man will leave them to themselves, or content himself with having them removed when they collect under the tail and annoy the animal."

Here, sirs, I dismiss the subject, thinking that I have justified the "faith that is in me," as indicated in this and my crudely-expressed views heretofore kindly published by you. If any one can give more orthodox, and universally acknowledged authorities than Messrs. BRACY, CLARK, DADD, WHITE, BLAIN, YOUATT, SKINNER, the work on Hippopathology, and the "History of the Horse," and in fact, if there can be presented a single standard modern work to advocate a thesis antagonistic to that

which I have endeavored to maintain, I should be glad to see or learn of it.

So far as I am concerned, it is now left for your readers to determine the question, as you put it, (not I) of "Bots or no Bots," and whether they will continue to kill or cure with all the "infallible bot remedies," which seem to be as common as blackberries, or thick as "leaves in Vallombrosa." Still wishing you success in your goodly purposes,
I am truly yours,
W. P. W.

Isle of Hope, Ga., 1855.

SANDY SOILS—SHEEP HUSBANDRY.

THAT sandy soil can be well and profitably cultivated has been long known; witness the barren sand of Belgium and the estate of Coke and Hatherton in England, or, nearer home, the blowing sand near Albany, and some small portions of Long Island. Their adaptation, also, for sheep husbandry is well known; and yet, within a few miles of this great city are thousands of acres every way capable of supporting immense flocks, with not a sheep on them. I have been led to make these observations from a recent trip on the Long Island Railroad, when, in the space of about fifty miles, I did not see that number of sheep; and, as a friend with me observed, on passing Hempstead plain, "here are the Downs, but where are the South Downs?" Certainly not there.

A great many sheep, I understand, are raised on the north side of the island, and the stock is generally improving; Mr. Becar, W. W. Mills and J. Smith having some fine flocks. Still they are the exception, not the rule, and it is the latter that we want. The growing taste for mutton and the high price a good article will always command, we think, should stimulate the farmers of Long Island to push forward in what I consider a profitable branch of husbandry; and instead of being satisfied with raising from eight to ten bushels of rye to the acre, and then carrying the straw off the farm, consume it on the farm, and not rest satisfied till they can, from the same land, raise from five to six hundred bushels of turnips. That this can be done, we will endeavor, at some future time to show.

L.,

[in Plough, Loom and Anvil.]

CORN DODGER.

EDITORS SOUTHERN CULTIVATOR—A dodger—what a rich boon it is—what a luxury, a glorious commonalty. It is the foundation stone—the very bone and sinew of all good living. Why don't people have more dodger and less ginger-bread fixins? They'd be the better for it. There is plenty of corn meal, water and salt everywhere, and that's all you want. Don't fumble it and chuck it about, and daub it up with grease, saleratus, eggs, pumpkins, and other outlandish flummigations—that aint dodger. Just stir it up with clean water (and salt if you choose) and bake it brown and crispy, as big as whole bricks, and bring it along smoking, steaming hot—that's a dodger. And there's nothing better. It's good with anything—it's good without anything—

It's good when it's hot, and its good when its cold—

It's good for the young, and it's good for the old.

A dodger—O, it's a glorious invention. It's the most wholesome diet that ever went down the throat of man. It won't give you the dyspepsia nor the rheumatism. It won't give you the "blooes;" and you don't have to take pills and other "pizen stuff" to work it off. It's the best vermifuge ever invented for children. It fattens "little niggers"—makes them grow—makes them strong and healthy—try it. There's nothing ahead of corn dodger.

OMO.

Toccoola, Miss., April, 1855.



THREE SOUTH DOWN BUCK LAMBS.

Sired by the noted Buck, "Young York," and owned by Lewis G. Morris, Esq., of Mount Fordham, Westchester Co., New York. These Lambs won the 1st prize at the New York State Fair in 1851.

THE RENOVATION OF SOIL, &c.

EDITORS SOUTHERN CULTIVATOR—As I have been a subscriber to the *Cultivator* for the last five years, and expect to continue so as long as I have a surplus dollar in my purse, I hope I may be pardoned for troubling you with a question or two, relative to the best mode of renovating or rather keeping up the virgin fertility of my soil with peas as the principal fertilizer. Is it best to sow them broad-cast and turn under whilst green and in bunch? or let them mature and rot on the ground? If best to turn under whilst green, at what season ought they be sown? and how should land be treated after the peas have been plowed under to protect it from the rays of the sun?

This place is in latitude 33 1-2°. I am a young farmer; have very little "book learning," but have adopted "book farming" as preferable to going it blind. When I commenced farming, some six or seven years ago, I thought it better to subscribe for one or two good agricultural journals, and to adopt the plans and opinions of others, as given in those "books" than to consume time unnecessarily in trying to find out for myself the same things, by a long life of toil—to say nothing of the disappointments, vexations and losses—to which I might possibly be subjected: and I have no cause of regret for sticking to my resolution.

The quality of my land is tolerably good; it is capable of producing 800 to 1,000 lbs. of cotton per acre, and 20 to 25 bushels of corn. Soil, a fine, dark sand, with a deep-yellow clay substratum. I cultivate but 12 acres to the hand—8 acres in cotton, and 4 in corn—with patches of potatoes, pindars, water melons, pumpkins, and last though not least, a vegetable garden which supplies an abundance of vegetables for white and black. In my garden are two beds of strawberries, 12 by 40 feet, which give my white family (there are only five of us) a bountiful supply of berries for five or six weeks; and a row of raspberries 60 yards long, which keeps up the supply of berries on our table until whortleberries and blackberries come in, and then we feast on pies, until the apples are ripe enough for dumplings. But I am probably taxing your patience with what does not interest you, and must

desist. I beg an answer to my questions at your earliest convenience through the columns of the *Cultivator*.

With much esteem, I am, respectfully,

J. B. R.

Luda, Ouachita Co., Ark., April 9th, 1855.

REMARKS.—As a general rule, it is better to have peas, clover and manure rot *in* the ground than *upon* it; and we should plow in peas to enrich land rather than let them decay on the surface. When plants decompose on the surface, much of their carbonic acid and ammonia escapes directly into the atmosphere, and does not benefit the soil.

The depth at which renovating crops ought to be turned under is a matter of some importance. Suppose the present staple of the soil is four inches, and the owner wishes to make it eight inches. How shall he operate? Having seen clover plowed in to recuperate wheat fields for the last thirty years, and studied the point under consideration with some care, experience teaches us to plow in green crops on light sandy land eight inches at once; but on cold, heavy clay soils, plow at first only one inch below the usual depth of plowing, and of course one inch into the compact clay below the staple. The vegetable matter rotting in contact with the subsoil, effects useful chemical changes in its minerals, mingles valuable mould with the same, and thus at once deepens and fructifies the surface soil. The next time one plows in a crop of peas, let the turning iron run an inch deeper; and so on from year to year, allowing a good coat of vegetation to an inch of clay until the available staple is eight or ten inches in depth, instead of four or five.

As to the time of sowing peas, that is the best which promises by rain and sunshine to give the largest growth. Weight of organized matter is what is sought; and the cultivator should endeavor to so arrange and advance his other operations as to put seed peas into the ground when his chances of a good crop are best. When the pods begin to form is the right time to bury the plants in the earth, to yield the maximum of gain to the land. If one could purchase ground gypsum at two or three dollars a

ton,* as the clover and wheat-growers of New York do, we should recommend the sowing of 100 pounds of this fertilizer to the acre, with peas. The high price of all commercial manures at the South is a serious hindrance to agricultural progress and improvement; but the cheapness of land greatly favors the *home production* of the food of plants. We are disposed to labor in this direction, believing it to promise the most satisfactory results. L.

ECONOMY IN FEEDING HORSES AND MULES.

WHEN corn sells at a dollar and a quarter a bushel, a planter has pretty strong inducements to study economy in feeding this grain to his horses and mules. The writer has recently been experimenting a little in the way of testing the relative value of *boiled* and *dry* corn for the nourishment of a working horse. The result is a gain by boiling varying from 20 to 25 per cent. We had rather feed four bushels of soaked and partly cooked corn than five bushels of the grain dry, particularly where one has very little hay, straw, blades, or other "roughness," to give with the corn.

It is well worth while to heat water boiling hot, and pour it over cut feed and ground grain to facilitate the extraction of their alimentary properties in the stomachs of working animals. It is not enough to fill the digestive apparatus with coarse forage, or the seeds of cereals, if we would secure the best attainable results for the food consumed. It must be so prepared as to yield up its life-sustaining virtues in a speedy and perfect manner. As a general thing, grain fed to horses is quite imperfectly digested; so much so, indeed, that not a few hogs and cows in and near villages and cities, subsist mainly on the droppings of horses that travel the streets.

Over 60 per cent. of corn is starch, which is insoluble in cold water, and not very soluble in juices of the stomach. By boiling or baking, starch is transformed into a kind of gum which dissolves readily in water, and is easy of digestion. If grain keeps up to anything like its present market price it will soon be as common to bake bread for horses as for men. Unlike the ox, the horse has a small single stomach; and there is not one argument in favor of cooking food for persons that does not apply to its equal preparation for horses. Scotch farmers have been some years in the practice of baking bread for their plow teams when hard at work. It is soon eaten, agrees well with the stomach, and gives a fatigued animal the maximum of time to lie down on a good bed and rest. This kind of feed, designed to make good blood, and a plenty of it, does not supersede the necessity of cut hay, fodder or straw, whose *bulk* is important for the due expansion, and vigorous action of the digestive organs.

Our practice is to boil corn some three or four hours, and salt it about as much as for hominy or bread. It swells to nearly twice its original volume, which is no inconsiderable advantage. Horses fed mostly in green rye, barley, corn, clover, or lucerne, do best when a part of the water in such succulent plants is dried out before they are eaten. Even cows giving milk, like half-cured new hay better than perfectly green grass. A young corn plant two feet or so in height, has about 90 parts of water in 100 of its stem and leaves. This fact does not prevent its being nutritive at that early stage of its growth, for it has very little wood, or woody fibre, which is indigestible. Dry matured plants yield their nutrient elements sparingly to horses, as compared with oxen and other ruminants.

Corn alone is too heavy feed for both horses and oxen; and among the thousand and one inventions for crushing

and grinding corn in the ear, we doubt whether there is anything equal to the "*Little Giant Corn and Cob Mills*," advertised by Messrs. CARMICHAEL & BEAN, in the pages of this journal. Large experience in feeding corn and cob meal has demonstrated its economical value. The cobs do not yield any notable amount of positive sustenance; but they serve to render *all* the nutritive elements in the corn available for the support of animal life, and where fodder is scarce as it now is, crushed cobs, if sound and not weathered, mix admirably with pure meal.

To work poor mules, oxen and horses, or waste their expensive food, is bad economy; and one way to keep teams poor is to use dull, worthless plows and harrows, which require both man and beast to go three times over a field to effect a degree of tillage which, with really good implements, might have been better done at one plowing or harrowing. Every step in agriculture ought to tell; but it can not, with bad tools, and badly kept working cattle and servants. L.

BURNING CLAY, OR MUD!—THE "FIRMAMENTUM."

MANY or most of our readers are, doubtless, aware that some genius in New Orleans, claims to have succeeded in making an excellent article of fuel from common clay, or earth. We perceive, by the *New Orleans True Delta*, that an experiment has been made in the furnace of that establishment testing the capacity of this material for raising steam. It is made into balls, which, on being thrown into a common grate or furnace like common coal, can, it is said, be easily ignited. The *True Delta* says:

"From what we have seen of the Firmamentum, previous to the public test of yesterday, and viewing the latter as conclusive, we give it as our unbiased and deliberate opinion that it will answer all the purposes of coal, so far as producing heat and generating steam are concerned, and the only point, in our mind, at issue, is the simple one—can it be furnished to consumers at such a price as will make it an object for them to use it? The proprietors of the invention say they can furnish the article—can deliver it at any point, for twenty-five cents a barrel. If they are right in their calculation, then the matter may be considered as settled, for it will be used in every case in preference to coal. It is infinitely preferable for use in private dwellings and hotels, as it produces no smoke. For locomotive purposes, we think it would be used, in preference to wood or coal, from the fact that however strong the fire, no sparks are emitted from it. This feature alone, of the Firmamentum, had it no other to recommend it, would bring it into general use for locomotive purposes."

The *New York Tribune* (itself a promulgator of vagaries and *isms*) thus quietly goes to work at the demolition of the "clay fuel" enterprise:

The march of mind in our day is great, but the march of gullibility would seem to be yet greater. The wonders achieved in the last half century have prepared the public mind for believing that almost anything is possible, and hence there exists a readiness to accept the promises of the wildest projectors, even when conflicting with principles of philosophy usually recognized as true. But a little while since Mr. Paine was enabled, by his plausible statements, so far to influence the public mind as materially to affect the value of Delaware and Hudson stock, and other coal property; and the accuracy of those statements was certified by some of the most respectable names in New England. Yet, all he taught was opposed to very simple philosophical principles—a knowledge of which would have saved many persons from heavy losses incurred in the effort to carry into effect the views of the charlatan by whom they were guided.

*It costs from \$14 to \$17, delivered in Augusta.

About the same time, another philosopher undertook to show that, by adding to the machinery of the hydraulic press, all the power could be gained without the loss of speed; and, of course, by increasing to the necessary extent the number of wheels, the hands of a man could be enabled to drive the train of a locomotive. It was perpetual motion over again, and yet it received the certificates of men of the highest standing in England.

Next, and but two years since, came a Cincinnati inventor, who drove a grist mill at full speed with as many wood shavings as he could carry in his hat, and promised to take a steamboat of the largest size to New Orleans with a bushel or two of coal; and this, too, was certified by men of the highest respectability, who had seen the machine in motion. The object of the inventor was, we presume, accomplished, for from that day to this we have heard no more of him or his engine.

Since then there have been others; but the latest scheme is now being carried out in New Orleans, by which clay is to be made to drive steamboats and locomotives, warm houses, and, perhaps, to furnish light. Power-presses have, as we are gravely assured, been driven by it, while it can be furnished at twenty-five cents a barrel, and must therefore, supersede coal as fuel. That it can be profitably supplied at that price, few will doubt; and, if any of the owners of clay deposits near New Orleans should be enabled to make contracts for supplying it as fuel, they will certainly be well paid for their land. They had better, as we think, make their contracts early, as the "excitement" produced by the new and wonderful discovery may pass away.

Of all known substances, clay is among the most remarkable, not only for incombustibility, but even for infusibility. The glass-blower melts his sand in crucibles made of it. The furnace-master uses it for the construction of walls within which he melts coal, lime and iron-ore. The chemist uses crucibles of clay when he subjects to the action of the blow-pipe the most refractory minerals—and yet this most incombustible substance, that can with difficulty be even fused, is by help of some hitherto undiscovered process to be resolved into thin air. Then it is to be used in driving engines and emptying the pockets of the credulous.

Clay is, as we are told by one of our chemical friends, a peroxide, incapable of further oxidation or combustion—but it may be mixed with bitumen, gas, or wood tar and then the bituminous matter will burn, but *the clay will not*. All our readers know that this earthy matter combined with coal remains unburned, and accumulates in their grates in the form of ashes; and they know well the intensity of the heat to which it has been subjected. If the carbon contained in the strongest anthracite is in capable of burning the few earthy particles combined with it, with what reason can we suppose that similar matter can elsewhere be made capable of burning itself, and giving light, heat and power? The thing is an absurdity, cooked up for the purpose of accomplishing an object.

A WORD ABOUT CHIMNEYS.

THE *London Quarterly Review* for January contains a capital article on the subject of open fire-places, discussing, among other things pertinent to the theme, the subject of smoking chimneys. As there doubtless are hundreds, if not thousands, of our numerous readers, who are afflicted with this household calamity, we shall be doing the public a service by giving the pith of the *Quarterly's* remarks on this subject:

Smoke does not, as is popularly supposed, ascend a chimney because it is lighter than air. Dr. Franklin

demonstrated, a century ago, that smoke is really heavier than air. But the murky cloud of gases, acids and vapor, which is called smoke, rises in the chimney, because mixed with the rarefied air which is ascending through the same channel. When there is no fire, the draught of the chimney is either small, or wanting altogether. Hence it is that even good chimneys, if they have been long disused, often smoke for the first five or ten minutes after a fire has been kindled, because until the air in the chimney becomes rarefied, there is nothing to draw the smoke upwards. It follows from this view of the origin of the draught in the chimney, that if there is an insufficient supply of air, as happens when all the doors of a room are closed and the windows listed, that the chimneys will smoke, because there being an insufficient supply of air to the fire, the coals only smoulder, there is no air to be rarefied, the smoke cannot ascend, and so the occupants of the apartment suffer.

It is as necessary, therefore, if we would not have smoke to annoy us, to provide plenty of fresh air for the fire, as it is to provide a chimney. Dr. Franklin found by experiment, that an open fire, in a room of ordinary size, required as much air as could be admitted through a hole in the wall six inches square. But such a hole, or even leaving a door open, produces a draught, and such a draught gives persons cold who sit in it. As far back as a century and a half ago, a Frenchman, named Gauger, invented a fire-place in order to obviate this. He opened a hole in the hearth, communicating with a channel which passed under the floor, and finally ended at an aperture in the wall of the house. Strange to say, this excellent plan has never yet been generally adopted. It is only now coming first into use in this country, as applied to supplying hot air furnaces with air; while comparatively few grates are furnished with air in this way, as they should be, if those sitting around them wish to avoid cold currents on their feet. Open fires are now left to be fed by the air which they suck in, so to speak, under the doors and through the crevices of the windows; and hence the complaint that a grate-fire roasts the front of the person, while the back is freezing. The having sufficient air to feed a chimney is, indeed, the principal security against a smoky room. There are few smoky chimneys which cannot be cured by simply giving them plenty of air. And this rule applies as well to stoves, furnaces, or other apparatus for heating, as to fires. What we have said about preventing smoke, also refers to preventing gas from anthracite fires.

It was an old notion that chimneys ought not to be crooked, whereas a slight bend towards the top is beneficial, for this prevents the sudden descent of wind or rain. Nor is the form of the chimney material; it may be tapering, or of equal bore; pyramidal or square; it is only necessary that it be constructed so as to offer no considerable resistance to the ascending current, for otherwise the hot air will be delayed in its ascent, and have time to cool. A high chimney always makes the best draught, and hence well-built factories invariably have such chimneys. Dwelling houses do not require such enormously high chimneys, but they must be high enough not to be over-topped by contiguous buildings else the wind, striking against the superincumbent wall, will be precipitated down the chimney, filling the room with smoke or gas.

Much of what we have said about smoky chimneys applies also to ventilation. The combustion of a fire, or of gas-lights, as well as our breathing, vitiate the air, so that every apartment ought to have an outlet for carrying off the carbonized and deleterious atmosphere. A hole, opening into the chimney, just below the ceiling, is the best method of meeting this difficulty. Rooms, heated by properly constructed furnaces, which admit fresh air raised to a temperature of 64°, and supplied with

such an opening, are the healthiest that can be had, unless it is apartments warmed by grates, and fitted with such a ventilator, the grates and room being fed with cold air in such a way as to prevent draughts on persons.

SEA ISLAND PASTURAGE—TASKS FOR NEGROES, &c.

EDITORS SOUTHERN CULTIVATOR—*Gentlemen*—I take the liberty of addressing you, as I know that the very object of your journal is utility—to give practical information to planters. Can you, then, tell me the number of acres required as pasture on our sea islands for a given number of cattle? 2d, Can you tell me the day's task for a negro in all the various kinds of work on a plantation? I understand that just such a schedule as I speak of was published a few months back in the *Charleston Mercury*, but I have no opportunity for getting at the files of that journal. This information would be of great benefit to many who, like myself, are just beginning to plant.

I am, gentlemen, very respectfully yours,

WARING.

Savannah, April, 1855.

REMARKS.—It is impossible for us to answer the first question of our correspondent, owing to our entire ignorance of the quality of his pastures, the amount of feed which they produce, the kind of cattle kept, &c. Some of our sea-shore stock-raisers will oblige us by answering this inquiry.

As regards the tasks or day's work allotted to negroes, we find the following in HOLMES' *Southern Farmer*, and consider it to be, in the main, fair, and nearly right.—EDS.

TASKS FOR ABLE-BODIED LABORERS.

At the different employments of the farm and plantation.

(NOTE.—The following tasks may under some circumstances be too large, and should be varied, according to the state of land, &c., particularly in ditching, hoeing, and listing; for in many places it would be easier to ditch 800 feet, than it would 500 where there are stumps, sands, &c.)

Ditching.—600 square feet.

Putting mud upon the bank.—600 square feet.

In making new drains.—15 inches wide, and 2 1-2 feet deep, 210 feet in length.

Cleaning old drains.—6 to 10 tasks, or quarters, according to the mud.

Cleaning old ditches.—1 to 2 tasks, or quarters, according to the mud.

Turning up land with a hoe.—1 quarter of an acre; but if stiff clay, it will require a third more labor.

Chopping.—One-half an acre.

Listing ground.—One-half an acre is the quantity allotted to each hand, but in old pastures, having a tough sod, one-quarter of an acre is as much as they can get through with; and even then with difficulty.

Bedding up.—In light soil one-quarter and a half, to two-quarters, or one-half an acre.

Trenching.—For small grain on high land, three-quarters of an acre, 80 or 90 rows in each quarter. *On rice plantations*, the Surveyor's measure is seldom made use of. One-half acre is 150 feet each way; a quarter is 75 feet each way, which is trenched 15 inches from centre to centre; this gives 60 rows in the quarter.

Covering.—3 quarters of an acre, 80 or 90 rows in each quarter.

Sowing.—2 1-2 to 3 acres. If the wind is high perhaps not more than 1 to 1 1-2 acres, this depends on the number of trenches in an acre. (See trenching.)

Hoeing cotton, corn and potatoes.—one-half to one acre.

Hoeing rice.—one-half an acre upon tide lands; but in lands sometimes not a quarter.

Threshing.—500 sheaves for a woman; 600 for a man. In *laying out fields* into quarters or tasks, a man and boy will do 40 acres

Getting task stakes.—500 to a hand.

Getting staves.—4 men to 800 staves.

Drawing staves.—500 each hand.

Getting barrel heading.—4 men to 300.

Hoop poles.—100 and brought home, if the distance is short, or 120 if left in the woods.

Getting puncheons.—500 broad puncheons, 4 and 5 feet in length, for 3 hands.

Squaring timber.—100 feet per day each carpenter.

Sawing pine.—100 feet; cypress, 120 feet.

Making worm fences.—Rails on the spot, and everything ready and place clear—a man and woman can put up 100 pannels.

Splitting rails.—100 rails, 12 feet long and heavy.

Post and rail fence.—4 negroes can put up 30 or 40 pannels per day, dig the holes two and a half to three feet deep, put down the posts, and rammed properly at 9 feet apart from each other.

Morticing posts.—A carpenter can make 60 mortices per day.

Splitting garden palings.—500 to 3 men.

Cutting wood.—1 cord, 8 by 4, by 4 feet.

Making rice barrels.—3 barrels a day; half barrels, 4 a day.

Shingling.—A square of 10 feet.

Mowing hay.—For an experienced laborer, half an acre per diem.

Cradling oats or small grain.—An expert hand after a little practice, can, with ease, cradle three acres a day; but it is not uncommon for experienced hands to cradle four and a half to five acres.

TOPPING COTTON.

EDITORS SOUTHERN CULTIVATOR—I have not been in a hurry to present, through your journal, to its readers, my last experiment in topping cotton, seeing you always have a stock of valuable communications on hand which might be more acceptable to the readers of the *Cultivator* than any thing I could say on any subject; but the time will soon arrive, when if any thing has been gained by topping cotton the readers of your journal should know it, that they may avail themselves of said information in time to profit by a trial themselves the coming season.

In advance of giving the result of my experiment last year, I will say: up to the last of July I have never known a fairer prospect for heavy crops of cotton in our section, but our hopes were soon blasted, as the drouth had then commenced and continued until at least one-half of the farms had dropped off in our lowest bottom lands, and but little was realized by the rains afterwards, consequently not much was gained by topping last year. I measured off, as usual, one acre of upland as good as I had on the plantation. Topped two rows and skipped two throughout the piece of land selected, which brings out the following result:

Topped rows made of seed cotton.....459 lbs.

Rows not topped.....439

Difference.....20 lbs.

One more year redeems my promise, and I then will take leave of you on this subject. Respectfully,

E. JINKINS.

Horse Pen, Choctaw Co, May, 1855.

☞ If you have a good manure heap, protect it with a covering, and though you will not thereby make it any richer, you will keep it from growing poorer.

PLANTING SWEET POTATOES ON LEVEL GROUND-- SUBSOILING, &c.

EDITORS SOUTHERN CULTIVATOR—In the April number of the *Cultivator*, is a communication about planting Sweet Potatoes on level ground, an excellent method, which ought always to be followed. Always anxious to simplify all labors, instead of complicating them, you will kindly excuse me for making a few remarks in regard to the many tools recommended for that task: first breaking up the ground with some kind of plow; then taking a shovel plow; next running a rooter; after that using a new ground coultter, and at last a scooter.

How would it do to take a real good subsoiling plow and have the work executed in a superior way at once, and have done with it?

I am a great advocate for subsoiling, a way which I have followed for more than thirty-five years, and the superior advantages of which but few sensible agriculturists will doubt any longer. My object in penning these lines is merely to draw attention to a plow which I am using. It is one of JOHN RICH'S, and called the "Washington plow." Two good horses or mules will easily run it 15 inches deep at once, on my pine-woods land. It cuts the furrow very perpendicular, runs it nicely horizontal at the bottom, and throws the soil out as finely as a farmer will wish; it also works itself very clean, and, considering the work it is doing, must be said to run easy. It thus comprises most of the good qualities which can be expected from a plow. In short, it is the best tool I ever met with for cultivating the soil deeply. Many of my friends have doubted the correctness of this statement, but all who visited me and examined it for themselves have been so fully convinced that they, in general, requested me to order similar ones for them.

When the soil is thus thoroughly broken up (and I have done it even with land that one year previous was overgrown with trees) the land is in fine order for planting any crop.

ROBERT NELSON.

Macon, Ga., April, 1855.

THE WAGON.

It is evident that the larger the wheels of a vehicle are, so much the lighter is the draft, until the centre of their circumference becomes equal in height to the horse's breast. Besides, large wheels produce less friction, because their velocity is less than small wheels, and the latter sink deeper in a soft road, thereby increasing the difficulty of transportation. The advantage of larger wheels than those in common use will further appear when we take into consideration that the fulcrum is at the bottom. The average height of the fore-wheels is not commonly over forty inches, which would only give the horses a lever power of twenty inches over the weight; moreover the weight is at too great a distance below the horses' breasts. If we should increase the height of the wheel to sixty inches, it would give the team a lever power of thirty inches; still leaving the weight sufficiently low, making a difference in favor of the horses of fifty per cent.

We can see no good reason why the hind-wheels should be larger than those before. It seems to us that they should be equal, the opinion of some wagoners to the contrary notwithstanding. Suppose, for instance, the fore-wheels should be four and the hind wheels six. The inclination forward of the line of traction would tend to press the load into the earth, and, consequently, increase the difficulty of drawing. If there be any advantage in having the wheels of different heights, why is it that the intelligent constructors of steam cars have not availed themselves of it? The advantage of larger wheels is somewhat lessened, it is true, by the increased difficulty

of turning in a narrow compass, but wheels being of equal height does not increase this difficulty.

As the fulcrum of the wheel is at the bottom, it follows that its motion increases as the distance from the bottom increases, and if a horizontal line (imaginary) be drawn, passing through the centre of motion, the velocity of that part above the line will be five times greater than the part below.

A wagon with two inch tire will sink in the ground four times deeper than a four inch tire, all things else being equal. The latter having double the space to sustain the load and only half the weight on any given space. I merely mention the four inch tire for the sake of illustration, three or three and a half being amply sufficient. Hoping some intelligent mechanic may possibly improve on these hints, I am gentlemen,

A BLACKSMITH,
[in *Miss. Conservative*.]

SHEEP REARING.

EDITORS SOUTHERN CULTIVATOR—Living within a few miles of the junction of the Charleston and Memphis and Mobile and Ohio Railroad, I am turning my attention some little to sheep, and I wish to know, through your very valuable paper, what quantity of ewes one buck will serve well. I have had fine luck with sheep in North Mississippi, where I have lived some six years; have to feed but little. Some one of your patrons more conversant with the management of sheep, will please give their experience through your paper, and very much oblige a new hand at the enterprise.

Most respectfully yours, &c.,
Jacinto, Miss., May, 1855.

R. E. H.

REMARKS.—RANDALL says, in his valuable "Sheep Husbandry," p. 197, that "yearling may run with 30 ewes; a two year old, with from 40 to 50; and a three year old, from 50 to 60," &c. By far too little attention is paid to this subject among us, and we join our correspondent in soliciting the sheep experience of our readers; and will also be pleased to receive the articles alluded to in his note.—Eds.

ECONOMY IN FEEDING STOCK.

EDITORS SOUTHERN CULTIVATOR—Having seen in your March number an article from my friend, Dr GOREE, (one of the most practical planters) on the Cow Pea, may I ask you to request him to give us his mode of using the shuck of the corn, as he used it in Alabama in the year 1842, when he took charge of his father's estate. That year the crop of corn was scant and I noticed that the mules were kept in fine order.

I have known for some that he had that peculiar tact of keeping his mules in (some* new way) fine condition, and this article on preserving Cow Pea hay makes me curious to learn how he feeds the shuck to so great advantage without cutting them up, by which nearly one-half the usual quantity of corn is dispensed with, and the mules kept in fine order.

I had designed calling on the Doctor, but the low stage of the Arkansas river prevented, and the hurry which a loss of one stage down caused. I was, however, much pleased with this part of Arkansas and am resolved to visit it again before I purchase elsewhere, as I learned the Doctor is very much pleased. The lands are certainly rich and cheap, and could I be sure of health, nothing would hinder me from moving out.

Arkansas Co., April, 1855.

*The old way is corn and fodder.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 6..... JUNE, 1855.

ANSWERS TO INQUIRIES, &c.

BURR MILL-STONE.—The specimens of rock that appeared very much like Burr Mill-Stone, sent to us by Mr. ROBERT, of Orion, Pike county, Ala., turned out, on the application of chemical tests, to be carbonate of lime. The samples all effervesce freely with hydrochloric acid.

SWEET POTATOES.—L. D.—We prefer the White Hayti Yam to all other varieties. It yields abundantly, is of superior quality, and keeps admirably. In planting this variety, "draws" or even cut vines are better than the roots, for the reason that when the "draws" are set out, the first roots that branch off make tubers; while the potato itself lies in the ground and slowly decays before any new rootlets or tubers are formed. We have succeeded in making table potatoes from "draws" planted as late as the middle of July, but we prefer May and June—the earlier the better, after the ground becomes warm, and all danger of frost is over. When our "draws" are ready we never wait for a "season," but plant according to the directions given in our *Work for the Month*, present number.

"CHOLERA," OR DISTEMPER IN POULTRY.—F. T. G.—*Prevention* is much better than an attempt to cure, which generally fails. However, as you ask our advice, here it is:—Keep your fowls out of the fields and woods in wet or damp weather or until after the dew is off in the morning—confine them to a clean, dry, gravelly yard—put a piece of red oak bark into their water, and let it remain, changing the water every day or two. If your fowls are taken sick and drop down helpless, feed them by hand, carefully, with balls of corn meal dough, or baked bread, saturated with common table mustard (mixed with water) or a drop or two of a mixture called "*Radway's Ready Relief*." You may be obliged to continue this treatment (hand feeding) for several days, as the fowl is too weak to pick up or assist itself. We have cured many fine young Brahmas in this way, and would advise you to try it. It is not worth the trouble, to doctor common or ordinary fowls. Whenever we see one of these seriously affected, we cut its head off and bury it deeply in the compost heap or manure pile.

PLASTER, OR GYPSUM. (A. D. B.) may be profitably applied as a topdressing to Cow Peas, Melons, Turnips, Potatoes, &c. Mixed with ashes and salt (in the proportion of 10 parts Gypsum, 4 of Ashes, and 1 of Salt) it may be used in the corn field with decided benefit. A small handful, or about two tablespoonsful to the hill, sprinkled close to the stalk, after the first hoeing, will seldom fail of producing a vigorous growth and an increased yield. Gypsum, or Plaster of Paris is a sulphate of lime, and is com-

posed (100 parts) of Sulphuric Acid, 43; Lime, 33; Water, 24. For its introduction into general use, in this country, we are indebted to that eminent agriculturist, the late Judge PETERS, of Pennsylvania. The gentleman to whom you allude in your postscript, (R. PETERS, Esq., of Atlanta), is the grandson of Judge PETERS, and as a practical farmer and stock-raiser, he fully keeps up the reputation of his ancestor. There is no Plaster at present in this market. Address, WM. ALLSTON GOURDIN, Charleston, S. C.

HYDRAULIC RAMS.—WM. B. L.—It is said (with how much truth we do not know, from experience,) that a fall of ten feet will raise a column of water one hundred and fifty feet high, at the rate of five quarts, (or a gallon and a quarter) per minute. At this rate, there is only *one* part raised to *eleven* wasted, where the ram is only supplied by a two inch pipe. A larger pipe, with a larger ram, would, doubtless, elevate all the water you need. A gentleman of Pennsylvania claims to have recently made important improvements in the construction of rams. His address is J. C. SRRODE, Philadelphia, Pa.

IRRIGATION.—"Water is the life of vegetation," as our friend, "R. N." truly says; but we are not aware that any systematic efforts have yet been made in the South to irrigate farms and plantations. We believe our Rice planters are the only persons who give the subject any particular attention. No country under the sun needs artificial watering more than the parched, arid and drouth-stricken lands of the planting States, and we shall rejoice to see even a small beginning made in this matter. If *irrigation* is beneficial in the cool, damp, rainy and foggy climate of England, how much more necessary is it in this land of almost perpetual heat and sunshine? It is well known that the roots of plants can only derive food from the soil in liquid form; and the fertilizing materials in a soil are decomposed and rendered soluble with a rapidity proportioned to the abundance of water supplied them. "The quantity of water," (says Mr. KNIGHT, a noted English gardener,) "which may be given with advantage to plants of almost every kind, during warm and bright weather, is, I believe, very much greater than any gardener who has not seen the result will be inclined to suppose possible; and it is greater than I myself could have believed, upon any other evidence than that of actual experience." Will not our very capable and experienced correspondent, "R. N." write out, for the benefit of our readers, the very interesting "talk" he gave us on this important subject, not long since? (In reference to the watering of gardens, see article headed "Grouting, Mulching, and Watering," in present number.)

MISSING NUMBERS.—A. G.—All letters relating to the mailing or other *business* department of this journal, must be addressed to WM. S. JONES, and all communications intended for our columns to "Editors Southern Cultivator, Augusta, Ga."

PLASTER OF PARIS.—Z. D. S.—We suppose you desire *calcined* Plaster. It may be obtained from almost any Druggist. We have enclosed your note to WM. R. SCHIRMER, Mill Stone Manufacturer, of this city.

CORN, COB AND SHUCK CRUSHER.—E. M. M.—Address J. ROWE, Tampa Bay, Florida. SCOTT'S "*Little Giant*," sold by CARMICHAEL & BEAN, of this city, is an excellent Corn and Cob Crusher, but we do not think it will cut up or pulverize the shuck, like Rowe's. Have answered you per mail, also.

"HOLCUS SACCHARATUS."—L. B.—Do not be disappointed, if this "Chinese Sugar Cane," should prove, to be closely allied to, if not identical with, the well known Broom Corn. It evidently belongs to that family; and, as we before remarked, may prove valuable for fodder.

BATTEY POTATOE.—J. W. B., of Woodville, Miss., and

many others, may address J. A. ANSLEY, of this city, who, we believe, has yet some of these Potatoes left.

SKINLESS OATS.—JAS. A. HUDSON, of Jefferson, Co., Ark., wishes to obtain some of this variety of Oats. Who can furnish it?

RAPE OR COLZA.—W. D. W.—See article of Mr. NELSON, in present number.

RESCUE GRASS SEED.—J. H. D., P. M.—Address B. V. IVERSON, Columbus, Ga.

Several other inquiries, received too late for present number, will be attended to in our next.

THE GROWING CROPS—BETTER PROSPECTS!

SINCE our last, this immediate region and many others throughout the country, have been favored with repeated and fertilizing showers; and we can make much more cheering reports of the state of the growing crops than we dared to hope for when our May number was issued: The Corn crop has taken a new and vigorous start—Wheat, Oats, Barley and other small grain (not previously too much injured by the frost) have stretched upwards several inches, and filled out their ears plumply—Cotton has grown off finely—early planted Sweet Potatoes vines are beginning to straggle across the ridges—Garden Vegetables, of all kinds, are most thrifty and promising; and in sections unvisited by the scathing breath of the Frost King, the labors of the Fruit Grower seem certain of being crowned with the most cheering success!

Let us all, then, while rejoicing in our brightening prospects, put forth increased efforts to avert the impending scarcity and famine—let us hope for that “peace and plenty,” which have been, hitherto, for many years, the heritage of our glorious country; and let us not, above all things, fail to return most grateful and heartfelt thanks to the merciful Giver of all Good!

“RESCUE GRASS.”—We have received from B. V. IVERSON, Esq., of Columbus, Ga., a number of letters addressed to him by gentlemen in different States, all speaking in high terms of the merits of his “Rescue Grass.” We have also on file a number of communications strongly urging the other side of the question; but as both sides have been quite fairly presented through our columns, heretofore, we do not see that any particular good can result from further agitation of the subject.

We will, however, in our July number, present the views of two gentlemen on this grass, *pro* and *con*, after which we beg to be allowed the privilege of resting the question for the present.

CURE FOR HYDROPHOBIA.—In a recent letter, our correspondent, Dr. J. L. GOREE, of Cummins, Arkansas Co., Ark., says;

“A strong decoction of Poke Root will cure any case of Hydrophobia (not hopelessly neglected) which can be produced. I have now the report of three cases cured—one in Mississippi, one in Tennessee and one in Arkansas. So, please proclaim it far and wide, as the disease is considered incurable.”

If this simple and easily obtained remedy should prove

a *specific* for this dreadful malady, it will be a great blessing to humanity. Will Dr. GOREE, be kind enough to give us, for publication, the method of administering it and all other needful particulars?—Eds.

COMMUNICATIONS have been received and are on file from the following contributors:

ALGERNON—B. BREWSTER—L. G. MORRIS—Dr. J. L. GOREE—W. D. GRIMES—ELISHA STRONG—B. V. IVERSON—M. L. M.—L. W. PAUL—A. M. P.—L. P. S.—J. R. JONES—J. W. B.—Dr. L. B. MERCER—J. A. H.—J. EICHELBERGER—ROBERT NELSON—JNO. F. MOSELY—S. W. MCGEE—R. E. H.—H. STRATTON, &c., &c.

These and many similar favors shall receive attention as soon as the crowded state of our columns will admit. We beg our friends to be patient, and to make their communications as short and pithy as possible during the warm weather which is now fast approaching.

CORRESPONDENTS, who prefer using initials or a fancy signature, must, in all cases, furnish the editors with their *real names*. Hereafter we shall be obliged, however reluctantly, to decline the communications of all who do not give us, in a private note, their proper names. We do not want the name for publication; but as an evidence of good faith. Will our friends take notice of this rule?

DOMESTIC ANIMALS.—We have received several copies of a splendidly printed and finely illustrated Catalogue of the improved Cattle, Sheep, Horses and Swine of LEWIS G. MORRIS, Esq., of Mount Fordham, Westchester Co., New York. It may be obtained by addressing Mr. MORRIS, as above, and all who take an interest in fine farm stock should possess it.

We have, also, received a number of Books, Pamphlets, &c., from various persons, whose kindness we hope more fully to acknowledge hereafter.

DEVON HERD BOOK.—All who are interested in improved animals, but more especially the breeders of Devons, will give attention to the advertisement of L. G. MORRIS, Esq., on our last page.

AGRICULTURAL BOOKS.—C. M. SAXTON & Co., Agricultural Book Publishers, New York, will accept our thanks for a number of new and valuable rural publications, a full account of which we will endeavor to give in our next.

READ the excellent article of “*AGRICOLA*” on the “*Management of Negroes*,” republished by the particular request of many of our readers, from one of our former volumes. Read, also, the able and entirely convincing “*Bot*,” article of “*W. P. W.*,” and many other communications of interest, in present issue.

COMMUNICATIONS for our columns should always be sent in by the 10th of the month previous to which they are expected to appear.

GROUTING, MULCHING, AND WATERING!

AFTER manuring, subsoiling or spading, pulverizing, preparing and cultivating the garden ground properly, the three other operations assential to complete success, are described by the words at the head of this article.

"Grouting" is a simple operation by which the roots of plants taken up in dry weather are coated over with a moist and (sometimes) fertilizing substance, which prevents their dying from excessive evaporation, and gives an impulse to their growth until their existence is rendered certain by a shower of rain. When properly done, it is of great utility, rendering the gardener or planter almost independent of the "seasons." We scarcely ever wait for a rain, in order to transplant cabbages, tomatoes, sweet potato draws, or any similar plant, our practice being simply this: We take a bucket of rain water or soap suds from the washing-tub, and stir into it enough leaf or woods mould and scrapings from the cow-pen to make it as thick as batter or thin mortar. Into this batter, we dip the roots of sweet potato draws or any other plant, and when they are well coated with the grouting mixture, we set them where they are intending to stand, in a hole made with a dibble or pointed stick, and having pressed the earth firmly around all parts of the root, the work is done. From 4 o'clock in the evening until sundown, is the best time for this work, as the cool dews of night greatly assist the plant in getting a "foot-hold" in its new locality. Should the ground be very dry, and the weather excessively warm, we drop a handful of pine-straw or other leaves around and over the newly-moved plant, to "make assurance doubly sure," and by this method, we seldom, if ever, lose 5 per cent. of our plants, even in the heat of midsummer. The handful of leaves is lifted from the plant, and spread around it as a *mulch*, as soon as the plant is firmly rooted.

"Mulching," all our readers ought to be tolerably familiar with, from the urgency and frequency with which we have pressed it upon their attention. It consists in surrounding the trunk or stem, and covering the ground over the roots of fruit trees, vines, herbaceous plants, vegetables, &c., &c., with a thick layer of partly decomposed leaves, pine-straw, saw dust, half rotted chips, stable litter, moss, or any other substance that will keep the ground moist, and by gradually decaying, give off nourishment to the growing plant. We have found it of the utmost value in all our horticultural operations; it is a protection against both frost and drouth, and has in numerous instances, preserved the lives of tender or half-hardy plants that had reached us in a perishing condition, after imperfect packing and a long journey. In addition to its value as a shade and fertilizer, it keeps down the growth of weeds, and enables the gardener or fruit-grower to apply water copiously, even under a burning sun, without any danger of wilting the plant or causing the surface of the ground to bake or harden,

Watering, regularly and abundantly, is almost indispensable, in the long-continued drouths of our climate. Rain, or pond water is best, where it can be obtained, un-

less the gardener prefers to give his plants a little extra stimulus with liquid manure. In order to prepare this, infuse 2 quarts of Peruvian guano or 4 quarts of hen-house manure in a barrel of water; keep it well covered and stirred up, and apply to the earth around the plant, just before sundown, either from the rose or nozzle of a watering-pot. Pure rain water may be poured all over the plant—leaves, stem and roots—but the liquid manure must be applied directly to the roots, without touching any other part of the plant. If your soil is unmulched, clayey, and inclined to bake, it is advisable to loosen it up deeply with a prong or forked hoe before applying the water, and to select always the cool of the evening for the job; but, if, on the contrary, it is well *mulched* and of an open texture, the water or liquid manure may be poured *through the mulching*, around the plant, at such times as are most convenient. Soap suds and chamber slops, diluted with equal quantities of rain or pond water, are invaluable fertilizers, and should never be thrown away.

See, also article headed "*Arable Land, and Water*," in present number.

"THE GOOD TIME COMING"—DEATH-BLOW TO "HARD TIMES!"

AGRICULTURISTS, and all who are at all interested in the products of the earth (rather a large and "respectable" class of our "fellow-citizens") must feel the greatest possible anxiety for the solution of the mystery hinted at in the following attractive item of news, which we copy from an extra or "supplement" of "*The Dime*," a little 10 cent paper, published in New York. Where, now, is "Terra-Culture" COMSTOCK, or even SIGNOR LATTIS, the great Egyptian double rice-crop man? We pause for a reply; but in the meantime, let the editor of *The Dime* be heard "for his cause:"

"We beg to call your attention to the following announcement. Though it may seem incredible, we can have no doubt of the fact:

"WONDERFUL DISCOVERY IN AGRICULTURE!"

"There has just been discovered in England, and patented in that country, France and Belgium, a method by which the products of agriculture can, with ease and certainty, be increased from five to ten fold, with a great improvement in quality. Not only are single crops increased in productiveness 300 to 500 per cent., but three crops may be raised in a season by the increased rapidity of growth produced by this method. It is applicable to all soils, and makes the most barren fertile and prolific. By this process, one acre will produce as much as from five to ten by the ordinary method, so that a man may support his family and even grow rich from a single acre. (!)

"A full account of this discovery will be given in the May number of *The Dime*, an illustrated monthly paper published at Ten Cents a year, or eleven copies for One Dollar, by Leland, Clay & Co., 321 Broadway, New York.

"We earnestly wish to bring this discovery to the knowledge of the whole agricultural population of the United States, as we believe it will be of the greatest benefit to thousands, and vastly increase the agricultural products of our country in quantity, and improve their quality."

Oh, yes! a system that enables a man to "support his family, and grow rich from a single acre"(!) will cer-

tainly be of the "greatest benefit to thousands," and we can hardly restrain our impatience to get hold of it! To be sure, at the "first blush," it is strongly suggestive of Barnum and Burnham—the gigantic and Lilliputian humbugs—but "we shall see what we shall see;" and our readers may rest assured that not a moment will be lost in transmitting to them this most important secret—after we receive it!

GEORGIA CASHMERE WOOL.—We were shown at the Agricultural Bureau a sample of the wool of the Angora or Cashmere goat,* sent to the Patent Office by Mr. Richard Peters, of Atlanta, Georgia. This specimen was taken from the progeny of one of the animals imported from Persia by Dr. James B. Davis, of Columbia, S. C., in 1849. This wool is about 10 or 11 inches in length, of a fine silky texture and pure whiteness. The clip of wool to each animal in this country is from 4 to 4 1-2 pounds—being a somewhat larger yield than that of Persia. The experiment thus far has proved highly satisfactory, as the entire flock has increased from 7 females and 2 males to upwards of 50; but, unfortunately, the births, in most instances have been males. They breed annually, and usually give two kids at one birth. Mr. Peters has recently purchased the entire stock; and Mr. Davis is on the point of embarking for Asia, with the object of importing more.—*Washington Union*.

NATIONAL BABY SHOW.—BARNUM is out with another baby show announcement. Twenty-one premiums are to be given. The finest baby under five years of age is to receive \$100; the finest under one year \$50; second finest under one year, \$15; third finest under one year, \$10, &c. The finest quartern, any age, \$250, and in that style. The names and particulars of the competing babies may be had in labels if ambitious mothers desire it. The exhibition is to open June 5th, and close June 8th.

EATING HORSE FLESH!

A FRENCH philosopher, MONS. GEOFFREY ST. HILAIRE, Prof. at the Museum of Natural History, has just delivered two lectures on the advantages of bringing horse flesh into use as food. There is no reason, he declares, why horse flesh should not be eaten like the ox and the sheep; the horse is herbivorous, and no deleterious element enters into its food or structure. Its flesh, besides, is full of azote. The ancient Germans and Scandinavians had a marked liking for horse flesh. They preserved a certain race of white horses to be sacrificed to Odin, and after the sacrifice they boiled the flesh and feasted on it. The introduction of Christianity put an end to this custom, and probably led to the aversion to horse flesh which is now generally manifested in Europe. The nomadic tribes of Northern Asia make horse flesh their favorite food, though they have numerous flocks of oxen and sheep.

As regards the Tartars and other "outside barbarians," this may all be true; but, in this civilized country anyone

who would undertake to introduce horse flesh into our cuisine, would be more than apt to "catch" one of the aforesaid "Tartars." *Monsieur's* idea will not work on this side of the water—we recognize too much that is akin to human intelligence in the horse to make a meal of him; and besides, in these days of *Lexington* and *Lecompte* races, and of long-priced "highflyers," an equine steak or roast would be a luxury that few except millionaires could afford to indulge in.

PLANTERS' AND FARMERS' LIBRARY.

A "YOUNG PLANTER," of Benton County, Ala., desires a list of the "best and most useful books on planting, farming, stock-raising, &c." We subjoin a priced list and add an asterisk (*) or star, to those which we consider the most valuable:

FARMING AND GARDENING.—Stephen's Book of the Farm, \$4; Allen's American Farm Book,* \$1; Blake's Farmer at Home, \$1 25; Buist's Family Kitchen Gardener,* 75 cts.; Beatty's Southern Agriculture,* \$1; Fessenden's Complete Farmer and Gardener,* \$1 25; The American Kitchen Gardener, 25 cts.; Cobbett's American Gardener, 50 cts.; Johnson's Dictionary of Modern Gardening,* \$1 50; Thae's Principles of Agriculture,* \$3; McMahon's American Gardener, \$3; European Agriculture, by Colman, \$5; Wilson on the Culture of Flax, 25 cents.

FRUIT CULTURE.—Elliot's American Fruit Grower's Guide,* \$1 25; Allen on the Grape,* \$1; Hoare on the Vine, 50 cts.; Spooner on the Grape, 38 cts.; Chorlton's Cold Grapery, 50 cts.; Pardee on the Strawberry,* 50 cts.; Downing's Fruits and Fruit Trees of America,* \$1 50; Barry's Fruit Garden,* \$1 25; Thomas' Fruit Culturist,* \$1; Cole's American Fruit Book, 50 cts.

MANURES AND COMPOSTS.—Browne's American Field Book of Manures,* \$1 25; Dana's Prize Essay on Manures,* 25 cts.; Dana's Muck Manual,* \$1; Ruffin's Calcareous Manures,* \$1 25; Practical Treatise on Manures,* 75 cts.

AGRICULTURAL CHEMISTRY.—Johnson's Agricultural Chemistry, \$1 25; Johnson's Elements of Agricultural Chemistry and Geology,* \$1; Johnson's Catechism, 25 cts.; Nash's Progressive Farmer,* 50 cts.; Elements of Agriculture, by Skinner, 25 cts.; Topham's Chemistry made Easy, 25 cts.; Chaptal's Chemistry made Easy, \$1; Norton's Scientific Agriculture,* 75 cts.; Blake's Agriculture for Schools, \$1; Stockhardt's Chemical Field Lectures,* \$1; Liebig's Agricultural Chemistry, paper,* 25 cents; Liebig's Animal Chemistry, paper,* 25 cents; Liebig's Letters on Chemistry, 25 cts.; Liebig's Chemistry of Food, 75 cts.; Christy's Chemistry of Agriculture, 50 cents.

HORSES.—Youatt on the Structure and Diseases of the Horse,* \$1 25; The Horse, by Richardson, 25 cents; Knowlson's Horse Doctor, 25 cts.; American Pocket Farrier, 50 cents; Dadd's Modern Horse Doctor,* \$1 25.

CATTLE.—Youatt and Martin on Cattle, by Ambrose Stevens,* \$1 25; Allen's Domestic Animals,* 75 cents; Milburne's Cow; Dairy Husbandry and Cattle Breeding, 25 cents; Knowlson's Cattle Doctor, 25 cts.; Guenon's Milch Cows* 38 cents; Farmers' Barn Book, \$1 25; Evans' Dairyman's Manual, \$1; Dadd's American Cattle Doctor,* \$1.

HOGS.—Youatt and Martin on the Hog,* 75 cts.; Richardson on the Hog, 25 cts.

SHEEP.—Randall's Sheep Husbandry,* \$1 25; The

* We believe the Angora and Cashmere Goats to be quite dissimilar. If we are in error, Dr. Davis or Mr. PETERS, will correct us.—Eds.

Shepherd's Own Book, \$2; Canfield on Sheep,* \$1; Youatt on Sheep,* 75 cts.; Spooner on Sheep, \$1 50.

POULTRY.—Browne's American Poultry Yard,* \$1; Domestic Fowls, by Richardson, 25 cts.; Dixon and Kerr's Ornamental and Domestic Poultry, (colored \$2 50) \$1; Miner's Domestic Poultry Book, 75 cts.; Illustrated Book of Domestic Poultry,* \$2 50; Bennett's Poultry Book, 84 cents.

BEES.—Quinby's Mysteries of Bee Keeping,* \$1; Miner's American Bee Keeper's Manual,* \$1 25; The Hive and Honey Bee, Richardson, 25 cts.; Phelps' Bee Keeper's Chart, 50 cts.; Weeks on the Honey Bee, 50 cts.; Townly on Bees, 50 cents; The Cottage and Farm Bee Keeper, 50 cts.; Huish on Bees, \$1.

FLOWERS AND HERBS.—Buist's American Flower Garden Directory,* \$1 25; The American Florist's Guide, 75 cts.; Buist's Rose Manual,* 75 cts.; American Rose Cultivists, 50 cts.; Every Lady her own Flower Gardener,* 25 cents; Browne's American Bird Fancier, 50 cts.; Book of Caged Birds,* \$1.

ARCHITECTURE AND LANDSCAPE GARDENING.—Rich's American Architect,* \$6; Allen's Rural Architecture,* \$1; Elliot's Cottages and Cottage Life,* \$2; Smith's Landscape Gardening,* \$1 25; Downing's Landscape Gardening,* \$3 50; Downing's Cottage Residences,* \$2.

* We might enumerate many other valuable works, but the foregoing will do to begin with. Our friends, C. M. SAXTON & Co., of 152 Fulton street, New York, will send any of them per mail, *free of postage*, upon the receipt of the prices annexed.

Holmes' "Southern Farmer," a little book of 250 pages, published at \$1 by W. M. R. BABCOCK, of Charleston, S. C., is also particularly valuable for all farmers, planters and gardeners of the South.

In this connection, we may, of course, be pardoned for suggesting that no Southern planter's library can be considered at all complete without a set of the back volumes of our own journal. Ten out of the twelve volumes already completed, may be obtained from the publisher. They contain a vast amount of invaluable information from all the leading agriculturists of the planting States, and are richly worth ten times their cost; which is only \$1 50 each, for bound volumes, or \$1 80, when we *prepay the postage*. Address W. M. S. JONES, Augusta Ga.

DEATH OF A DISTINGUISHED AGRICULTURIST.—It is with feelings of regret that we announce the death of C. P. Holcomb, Esq., which occurred on Thursday, the 5th inst., at his residence, Devondale Farm, near New Castle, Del. He was a native of Conn., and, after having studied law, removed to Philadelphia, and soon became a prominent member of the bar in that city. In 1841 he removed to this State, and engaged in the pursuit of agriculture, purchased a fine tract of land, which he greatly improved, erected an elegant mansion-house, planted fruit and ornamental trees, and otherwise beautified the grounds. He was a warm advocate of improved culture, and in connection with a few other public spirited gentlemen, gave great impetus to the agriculture of our county and infused a general rivalry among our farmers, always ready to shoulder his part of the burthen, contributing by example and precept to make not only two blades of grass, but two and three bushels of wheat and corn, grow where

but one grew before. But how uncertain are the things of earth. In his death society has lost one of its bright ornaments, and agriculture one of its able advocates and exemplifiers.—*Del. Rep.*

PLANT AND SOW!—'TIS NOT TOO LATE YET!

Our editorial brethren throughout the whole country are all urging the farmers to put in abundant crops of potatoes, corn, peas, and whatever may serve as a substitute for wheat. There will be no supply from last year's crops, and the farmers need not fear low prices. The next year will furnish abundant demand for all that the soil can produce. It is, says the Philadelphia *Ledger*, famine and starvation prices that we have to fear, and not a glutted market. The dry fall prevented many from sowing wheat freely, and they must not rely upon what the far west may produce to make up for their lack. Let them cover every spot they can occupy with something that will do for the sustenance of man or beast, or both.

THAT BUCK-EYE, &C.

EDITORS SOUTHERN CULTIVATOR.—A writer in the *Cultivator* for April, recommends the carrying of a Buck-Eye in the pantaloons pocket as an infallible cure for piles. This reminds me of an infallible remedy I once heard of for rheumatism. It was the carrying, in the pantaloons pocket, of a certain little crooked bone of the male Raccoon.

Nevertheless, I have heard a good deal about this buck-eye remedy, and there is a good deal of very respectable testimony in its favor. True, it don't stand to reason, as you say, and I can't understand by what mode of operation it can possibly do any good. If it does cure, it has some important advantages over most other remedies. The application is extremely simple, and neither painful nor disagreeable in any way. It is about as cheap as one could ask, and it *can do no harm*. Try it.

IT WON'T TAKE.—It is said that "a patent has been obtained for the preparation of maize leaf as a substitute for tobacco." *It won't take—they can't make it nasty enough.* OMO.

Toccopola, Miss., April, 1855.

TO CURE FISTULA IN A HORSE.

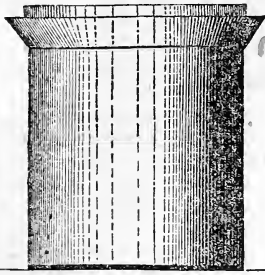
EDITORS SOUTHERN CULTIVATOR.—In the April number of the *Cultivator* I notice a communication from "Mechlenburg," relative to the cure of Fistula. And as you have placed his remedy in the columns of your invaluable *Cultivator*, I presumed it would not be amiss to send you another remedy which I think is much better than his. I have tried the following remedy repeatedly and found it a certain, safe and infallible one:

Take the burnt dirt from a chimney and put it in an oven; beat it fine; then place it over the fire and pour in a sufficient quantity of good soft soap to thin it well; then bring it to a boil; mix moss or cotton with it to hold it together; put it on a cloth; girt a blanket on the horse; place the poultice on boiling hot; tie the cloth over it and keep it on until it cools; repeat it again the third day and a cure is effected without opening. Do this as soon as the Fistula is discovered and it will never fail. The horse is fit for use in a few weeks. The same application will cure the Poll Evil. I have never failed (nor has any one who has tried this remedy) to accomplish a perfect cure without opening the Fistula. Will you insert this for the benefit of farmers?

Yours with respect,

J. M. BRIER.

Bastrop, La., April, 1855.



ARTHUR'S PRESERVING CANS AND JARS.

We briefly alluded to this valuable invention in our May number, and now present the above engraving and subjoined description from the circular of the manufacturers:

"The cans and jars are constructed with a channel around the mouth, near the top, into which the cover fits loosely. This channel is filled with very adhesive cement, prepared for the purpose, and allowed to harden. In order to seal the vessel hermetically, it is only necessary to heat the cover slightly, and press it into place. It may be opened with as much ease as it is closed, by slightly warming the top. The ordinary tin cans, used for the same purpose for which this is intended, cannot be closed, as is well known, without the aid of a tinner; are difficult to open, and are generally so much injured in opening as to be useless for future service.

"By this simple contrivance, the process of hermetical sealing is placed conveniently within the reach of every individual; and fruit, vegetables and butter (if properly prepared) may be kept, with their natural flavor unimpaired, for an indefinite length of time.

"These vessels have been thoroughly tested, during the past summer; and their contents, after the lapse of months have been found unchanged. At a late meeting of the Farmers' Club, in New York City, a can of ripe peaches, preserved by this method, was opened, and the flavor found unimpaired. The members of the club spoke warmly in favor of the invention.

"METHOD OF PRESERVING FRESH FRUITS AND VEGETABLES.—A great deal of mystery has been made of this simple matter, and it is generally supposed that the preservation of fruits and vegetables, in a fresh state, depends upon some process known only to the initiated. The simple agent in the work of preservation is *heat*. If, after the application of heat for a certain time, the article be sealed up hermetically, it will remain unchanged for an almost indefinite period.

"HOW TO APPLY THE HEAT.—Fill the can or jar with ripe fruit, adding a little sugar—simply enough to render the fruit palatable—and set it in a vessel of water, either cold or hot. Let the water boil, and continue boiling until the fruit is well heated through—say half an hour. Direction has been given to simply let the water boil, but such direction is defective, as at this time the fruit in the centre of the vessel will be scarcely warmed. Should the vessel be then sealed, fermentation will take place. The heat must thoroughly penetrate the contents of the vessel.

"ANOTHER WAY.—A lady of Philadelphia, whose peaches keep beautifully, and retain all their delicious flavor, takes half a pound of sugar to each pound of peaches. The sugar is put into a preserving kettle, with half a pint of water to every pound of sugar, heated, and the surface skimmed. Into this syrup the peaches, after being pared, are placed, and boiled ten minutes. The peaches are then put into the cans hot, and immediately sealed up. The same method pursued with other ripe

fruits, will no doubt, be equally successful. Some persons make a syrup of only one pound of sugar to every four pounds of fruit.

"FRESH STEWED FRUITS.—All kinds of fresh stewed fruits may be kept in these vessels. It will only be necessary to stew the fruit as for the table, adding the amount of sugar required to make it palatable; fill up the vessel with the hot fruit and seal at once.

"HOW TO KNOW THAT THE CAN OR JAR IS HERMETICALLY SEALED, AND THAT THE CONTENTS WILL KEEP.—If the cans are used, the contents, as soon as they cool, will slightly shrink, leaving a vacuum, and the top and bottom of the can will become concave, from the pressure of the external air. This shows that the sealing is perfect. Set the can in a warm place, and if, after four or five days, the concave condition of the top and bottom remain, all is right. But if they swell out, fermentation has commenced. As soon as this is perceived, open, and heat the contents as at first. In glass jars, the signs of fermentation will be the forming of air-bubbles. If these do not appear, the sealing is perfect and the contents will keep.

"THE CAN AND JAR MAY BE APPLIED TO VARIOUS USES.—There are many purposes for which these self-sealing, air-tight Cans and Jars may be used in families, as well as by confectioners, grocers, and others, which will suggest themselves. For ordinary fruit-preserves, pickles, &c., they furnish a sure protection from the air. Housekeepers need not fear the fermentation or "working" of their *sweet meats*, even when half the usual quantity of sugar is employed, if hermetically sealed in one of these air-tight jars.

"ADVANTAGES OVER THE ORDINARY FRUIT CAN.—The advantages which the "self sealing, air-tight can" possesses over the ordinary tin fruit can, are:—1st. It may be securely sealed by any person, in a few moments, without the aid of a tinner. 2d. It may be opened as easily as it was sealed, and without the slightest injury to the can. 3d. As the lid covers the whole top of the can, when it is removed the can may be cleaned as easily as any other open vessel—the difficulty of cleaning the ordinary fruit cans, through the small hole in the top, is well known to all who have used them a second time. 4th. As the can sustains no injury whatever, either in sealing or unsealing, it will last for years, and is, therefore, far more economical than the ordinary can used for putting up fresh fruits and vegetables, even though the latter may be a trifle lower in price.

"When strawberries first appear, the housekeeper might put up a few small cans or jars, with various proportions of sugar, in order to satisfy herself. The result would be known to her by the time this fruit is most plentiful in the market, and she could then, with confidence, increase the number. Put up with half, or less than half, the quantity of sugar usually used, the fruit will retain much of its natural flavor. The experiments could embrace a very small quantity of sugar—and the smaller the quantity needed to make the result sure, the more natural, of course, the flavor of the fruit.

"Raspberries, cherries, plums, peaches, &c., &c., could be tried in turn, at small expense and trouble.

"The hermetical sealing of the vessel is warranted. The result will, therefore, depend upon the care and accuracy with which the articles enclosed in them are put up. If done intelligently, failures will rarely, if ever, take place."

DIRECTIONS FOR SEALING AND UNSEALING.

"FOR SEALING.—After the vessel is filled, heat the cover, (by laying it, edge down, upon the top of the range or stove) hot enough to penetrate the cement, and then press it into its place. The edge of the lid must go down to the bottom of the channel. Be careful not to

heat the cover sufficiently to melt the solder. A temperature high enough to melt a small piece of rosin is sufficient. Lay a weight upon the cover until the cement hardens. The weight must be heavy enough to keep the lid firmly down. If the sealing is perfect, the top and bottom will become slightly concave, when the contents cool.

"FOR UNSEALING.—Place the Can in the oven of the range or stove, until the cement becomes quite soft. Then remove the Can, and lift off the cover. Let it stand until the cement cools, when the contents may be poured out, and the Can, after cleansing, will be ready for use again."

Those who wish to obtain those Cans or Jars, may address D. B. PLUMB & Co., Augusta, Ga.; or ARTHUR, BURNHAM & Co., Philadelphia, Pa.

"RESCUE GRASS," &C.

EDITORS SOUTHERN CULTIVATOR—A transcript of the brief comment of "J. W. B." in your April issue, on the famous Rescue Grass, would express my experience with it thus far. I sowed a little patch of sandy land which had been "cow-penned," in September last, and the grass is now as tall as my pen, which, by the way, is not an old-fashioned goose quill. If, however, I should continue to write with it until I purchase another peck of Rescue Grass seed, the inference might be fairly deduced therefrom, that it had in the mean time been metamorphosed into a *Goose's* quill. Let me state, however, that I think the seed were sown too thick and covered too deep. But such mismanagement would not have prevented the development of every spear. The process of development is onward—the seed are forming, and the spears are not likely to topple with their load of fruit. It is *standing*—not *running* to seed.

Your strictures upon the proposed speculation of SIGNOR LATTIS, the Egyptian rice-grower, are decidedly opportune and appropriate. It is not likely that any warming process better than old fashioned solar rays will be discovered for the fullest development of vegetation; and it is simply ridiculous to talk of gathering large crops from land and returning nothing back to it, without improving its fertility. The elements of fertility in soils go out in their products, and without corresponding returns, the process of deterioration must go on with more or less rapidity.

Farmers must learn, sooner or later, that the habit of borrowing, perpetually, from their land and never paying back, is barbarous—unnatural—ruinous. It involves a shameful betrayal of trust towards the munificent Giver of land, which retributive justice cannot fail to punish. The ability to give without impoverishment is a supernatural attribute. Nature's laws, which are as immutable as their Author, operate upon the principle of giving and receiving—the common-sense principle of "*quid pro quo*."

The remarks of Dr. KERSH, with your comments, under the head of Geological and Agricultural Text Books, are highly interesting, and not less important to the interests of the planting public. I trust that the noble movement of Dr. TERRELL will prove the advent of a brighter day for the progress of scientific Agriculture. But I must stop short in my running commentary upon the rich contents of your April number, by adding my humble, but most hearty "well done," to your noble efforts in the great cause of Agricultural advancement. T. P. L.

Darlington, S. C., April, 1855.

THE vast extent of the United States is illustrated by the fact that while the inhabitants of New Orleans are feasting on strawberries, people in the Northern extremity have snow three feet in depth in their forests.

WHAT SHALL WE EAT?—HIGH PRICES.

"ALL kinds of provisions, especially flour, beef and butter, are again enormously high. People will soon have to live on beans."—*Exchange*.

Such is the piteous language of several of our cotemporaries, but if no worse fate happens than that here predicted, we shall not fear the extinction of our race by starvation for some time to come, at least. The case is bad enough, however, and we ask the attention of our readers to the subject of "what kinds of food are cheapest?" which is always a matter of interest, and especially so now. Let us first get a clear idea of the use of food to the system.

The bodies of human and other animals, are chiefly made up of three parts—bones, muscles and fat—and the object of food is to supply the waste of these. Each of these three portions of the body are nourished, enlarged, or renovated by different kinds of food, or by different elements in the same food.

The BONES, constituting the frame-work of the body, are mainly composed of mineral elements. Most kinds of food, and especially the fluids we drink, contain a supply of these minerals, and we may leave them out of the reckoning.

The MUSCLES are the lean or red flesh of warm-blooded animals—including, besides land animals, whales and some other inhabitants of the water. It is upon the muscles or lean flesh that we depend for strength, or power to labor. One person may have a large body and yet be very weak, because of a lack of this lean muscular flesh; while another may have a small body, and yet be very strong, because his flesh is nearly all muscular.

The FATTY portions of the body serve to keep up the respiration (breathing) and to supply the system with warmth. We know by common observation that corpulent persons—those having much fat upon their bodies—are usually of a warmer temperament, and suffer less from cold than those whose flesh is less in quantity, and this chiefly muscle or hard red flesh.

The waste of the *muscles* (lean flesh) depends upon the amount of exertion put forth; the waste of the fat, upon the amount of heat necessary to be supplied. Active persons require more muscle-forming food. They also breathe faster and require more fat-forming food than those less active, but they chiefly need muscle.

In winter the external cold rapidly exhausts the heat of the body, and hence fat or heat producing food, is required in greater abundance, than in summer, when muscle or strength-producing food is most needed. Either of these two parts of the body may be nourished by supplying it with the appropriate food. The lean, and the laboring man require different food from the corpulent or sedentary.

The working animal will thrive best and perform most work when fed with muscle-forming food; the fattening animal requires that tending to the accumulation of fat.

OF ANIMAL FOOD, laboring persons—and others in warm weather—should partake more freely of lean meats, such as beef steak, while in winter those producing fat may be consumed more freely. The usual practice among laborers of eating large quantities of fat pork while hard at work in summer, is by no means a judicious one. Lean meats and those having little oil or grease, are much better adapted to their wants.

VEGETABLE FOOD of different kinds contains more or less of the elements of both muscle and fat, but the relative proportion of these is very different. Those kinds of food containing most *oil*, *starch*, *gum* and *sugar*, yield the most fat; those having the most *gluten*, *albumen* or *legumin*, yield the most muscle or lean flesh. For example, 100 lbs. of fine wheat flour contain about 70 lbs. of starch—a fat-producing element—and 11 lbs. only of gluten—a muscle-forming element—7 to 1: while 100 lbs.

of beans contain only 42 lbs. of fat-producing, and 26 lbs. of muscle-producing—or about 7 to 4 1-3.

In the following table we give an approximate estimate of the average amount of each of these two kinds of elements in some of the more common kinds of vegetable food:

100 lbs.	Muscle-forming elements.	Fat-forming elements.	Relative proportion of each.	Husk or woody-fibre.
Barley.....	14 lbs.	63 lbs.	1 to 4½	15 lbs.
Beans.....	26 "	42 "	1 to 1½	10 "
Beets.....	2 "	12 "	1 to 6	(?)
Buckwheat.....	8 "	54 "	1 to 6½	25 "
Carrots.....	1½ "	10 "	1 to 6½	3 "
Corn.....	12 "	77 "	1 to 6½	6 "
Oats.....	17 "	66 "	1 to 4	20 "
Peas.....	24 "	52 "	1 to 2½	8 "
Potatoes.....	2 "	19 "	1 to 9½	4 "
Turnips (field).....	1½ "	9 "	1 to 6	2 "
Turnips, Swedish.....	2½ "	12 "	1 to 5½	2 "
Wheat flour.....	11 "	79 "	1 to 7	
Wheat bran.....	18 "	6 "	1 to ½	55 "
Cheese (whole milk).....	28 "	27 "	1 to 1	
Cheese (skim-milk).....	45 "	6 "	1 to ½	

From this table we may learn something of the relative value of different kinds of food. The first column gives the amount of muscle-producing elements in 100 lbs.; the second, the fat or heat-producing elements; the third, the relative proportion of these two elements; and the fourth, the husky matter, which aids digestion by stimulating to action the stomach and alimentary canal. We see, by the third column, that barley and oats are similar, there being about 4 times as much fattening materials as of muscle-forming. Beets, buckwheat, carrots, corn and turnips, are also similar and are all better adapted to fattening than either barley or oats.

In potatoes and fine flour, the fat elements are in still higher proportion.

On the contrary, beans, peas, wheat bran, and cheese, are peculiarly adapted for producing muscles. We see, also, that skim-milk cheese contains, in a given weight, more muscle elements than any of the other substances. Whole milk cheese, from which the cream or butter has not been removed before making the cheese, contains large amounts of both elements.

Let us see what lessons this table teaches in reference to the wants of laboring persons during the summer season. We will suppose that each kind of food here named contains enough fat-forming materials for the wants of the body, and estimate the cost per pound of the strength or muscle-giving elements:

Cost.	Muscle-producing elements.	Cost of Muscle producing elements.
Barley.....	\$1.50 per bu. 8.4 lbs.	18c. per lb.
Beans.....	2.50 " 16.6 "	15 "
Corn.....	1.10 " 6.7 "	16½ "
Oats.....	.68 " 5.2 "	13 "
Peas.....	2.00 " 14.3 "	14 "
Potatoes.....	1.50 " 1.6 "	94 " (!)
Turnips.....	.50 " 1.2 "	41 "
Flour (fine).....	12.00 per bbl. 22.0 "	54 "
Flour (unbolted).....	11.00 " 24.8 "	44 "

At the prices given in our table, we can readily see which of the articles named furnish the *cheapest* elements of strength to the laboring man. They stand:

1, Oats; 2, Peas; 3, Beans; 4, Corn; 5, Barley; 6, Turnips; 7, Wheat flour (unbolted); 8, Wheat flour (fine); and last, Potatoes. Potatoes are principally composed of starch and water, and while serving well for winter food, they are little adapted to nourish and strengthen the summer laborer.

We have been unable to obtain any reliable analyses of

salt fish, to compare them with fresh beef, as we intended.

There is no doubt, however, that dry salt fish, at 5 or 6 cents per lb., is by far cheaper than undried beef at 10 to 15 cents per lb.

Beans are too much neglected as an article of both summer and winter food. Boiled soft—not dried up and half charred by baking—with a little seasoning added, they are the best substitute for meat to be found among the vegetable articles of diet. They are frequently spoiled by cooking them with too much fat pork. They contain in themselves a large amount of oil. Boiled with a shank of beef bone they make a nutritious soup. One bushel of beans, costing \$2.50, is probably worth more to a laboring man, than four bushels of potatoes, costing \$6 or \$8.

Peas, barley and oat meal are each cheaper and more nutritious than flour.

Cabbages, though containing much water, are very valuable as muscle-forming food.—*American Agriculturist*.

HOLLOW HORN IN CATTLE.

EDITORS SOUTHERN CULTIVATOR—In your April number, I find an "inquiry" from "A SUBSCRIBER," in relation to "hollow horn" in cattle, to which I here attempt a reply.

Hollow horn is decay of the pith of the horn, and may exist for considerable time before its effects are manifest. Consequently, the condition of an animal is not always to be regarded as evidence of its presence or absence. Some profess to be skeptical concerning its existence, but I have witnessed it in several instances.

The cause, in my opinion, is mostly exposure to cold, and especially cold rains. I dare say, however, that poverty, *alias* "hollow belly," is not unfrequently the primary cause; as an animal is thus rendered destitute of that degree of heat so essentially necessary to counteract the influence of cold.

The symptoms are dullness of the eyes, sometimes attended with dizziness; want of appetite; disposition to lie down; shaking of the head; and, in the latter stage, coldness of the horn.

To prevent it, comfortable houses or shelters protected from northern winds are highly necessary; but where these are not available, tar, applied occasionally, during winter, around the *root* of the horn, will afford some protection by preventing the influence of cold on this part, which is most susceptible.

The remedy consists in perforating the horn (*on the under side to prevent rain from entering it in future*;) with a gimlet of size sufficient to admit into its bore the pipe of a small syringe or goose quill. Then inject into the horn a preparation made of good vinegar and camphorated spirits; or, vinegar, salt, and black pepper, finely pulverized; or, vinegar, salt, and number six (tincture of myrrh.) This should be done daily until relief is obtained. I know no particular proportion for these ingredients. The object is to cleanse the horn, dispel its humors and prevent further decay. As these injections, together with waters in the head, are discharged at the nostril, I would recommend steaming the head over a preparation made by boiling the green leaf of the pine tree. I have no doubt, too, but have not tried it, that a dose or two of salts, or any mild purgative, would be beneficial. To anoint the upper part of the head between the horns with spirits of turpentine, and wrap the same with a cloth, is also of advantage. But in any kind of treatment, and the latter especially, the animal should be kept out of rain, and comfortably warm.

HOMESPUN.

Two or three spoonfuls of tar or lard put into the mouths of cattle, hoven from eating clover, will relieve.

THE "SHOWMAN" FARMER—PHYSICING LAND!— AN ELEPHANT PLOWING!!!

ONE of our Northern exchanges furnishes the subjoined humorous account of the first experiment of BARNUM as an agricultural chemist. It is worth reading:

Barnum—the Barnum, is a Connecticut farmer. He has a passion that way. It is his present hobby. He always has a hobby. Sometimes it is a "Fire Annihilator," and sometimes the Crystal Palace annihilates him.

Last year he had the hen fever. That was his hobby. He rode it till he spent about \$2,000, and then found that he had neither eggs or chickens for family use. His neighbor's hens that "stole their nests," under the barn or by the side of the fence, hatched more chickens than his did, and when they were grown, they were healthy and good to eat, while his were drooping and sickly in their costly house.

Farming, however, was always a hobby with him. He has been for years buying up the old fields around Bridgeport and digging out the stones, covering the ground with muck dug out of all the neighboring swamps. Then he bought all the stable-manure that he could get hold of: in the village and carted it out, but it did not pay; it was half straw and one-fourth water, and it was expensive. That hobby broke down. It has broken down a thousand times before, but the more it broke, the more old fogysism stuck to it. It was the ancient custom of the land to plow shallow and top-dress with stable-manure, sea-weed and fish. Digging muck was an innovation. It was a good thing, but it did not pay long transportation. Something better was wanted. Somebody said, use salt. That did not look reasonable. What virtue was there in salt to make plants grow? Somebody else said, use saltpetre. But that was evident nonsense. Saltpetre was only to preserve meat—it was not manure. Another wise man told him Glauber salts were good, but a wiser one told him that Epsom salts were better.

"Bless your soul, man," says Barnum, "do you suppose I want to physic my land? No, Sir; I want to feed it, and make it feed me."

So he took to the study of agriculture. He took several learned agricultural papers, and read them, and—well, he concluded that he was not the only humbug in the world.

So he went off lecturing upon humbug as a science, under the full impression that he had been about as badly humbugged, in the agricultural line, hens and hundred-dollar ducks included, as he ever humbugged anybody with woolly horses and Feejee mermaids.

Still he was not satisfied. He thought Connecticut soil had something in it, and if it could be stimulated to give it up, it would produce something besides daisies and muldons.

As he did not need to study his lecture—that came natural—he bought Johnson's Chemistry, Norton's Chemistry and Liebig's Chemistry, and devoted his leisure hours of traveling to search out what was the best and most concentrated manure to apply to his old fields. He had already done one very essential thing; he had plowed the soil deeper than it was ever plowed before; and now he wanted to manure better and cheaper, and make it more productive. So he studied agricultural chemistry. Therein he learned these facts:

That an application of 100 lbs. of *nitrate of potash* to an acre of land had doubled the crop of grass.

Again, he read that the same quantity of *sulphate of soda* had produced the same or a better effect.

It was also stated that *sulphate of magnesia* was still better, and that remarkable effects had been produced by a free use of *muriate of soda*. *Nitrate of soda* had also done wonders.

The author suggested that the farmer might procure a

portion of each of these sulphates and nitrates and mix them together and produce a cheaper and more concentrated manure than super-phosphate of lime or Guano.

Full of this idea, Farmer Barnum returned to New York, and went forthwith to a dealer in drugs, medicines and chemicals, and inquired the prices of—Nitrate of potash?—6c. a pound; Nitrate of soda?—4c.; Sulphate of magnesia?—2 1-2c.; Muriate of soda?—1 1-2c.

"Very well; put me up a hoghead of each."

In due time the farmer was ready to begin to use his new manures, or, rather, he was first curious—even showmen have curiosity—to see what these nitrates and sulphates all looked like. So he ordered the casks that had arrived to be opened for inspection. That was soon done, and the man, with consternation written upon his face, came back with handful of the contents, and reported: "Mr. Barnum, you're sold—humbugged. Look here; that was marked 'Nitrate of potash'—what do you call that?"

"That! that is saltpetre—nothing else."

"And this? This was marked 'Sulphate of Soda.'"

"Why, that!—that"—and he tasted—"that—oh, pshaw—that is Glauber salts."

"And this—sulphate of magnesia?"

"Bah—that is Epsom salts."

"And shall I send them back?"

"Yes—no—hold on. Perhaps the druggist in the village has sent for them, and they have made a mistake, and sent my nitrates and sulphates to him, and his physic to me."

So he posted down town to inquire; but no—nobody had sent for any glauber salts; and so he came back to write a letter and blow up the dealer who had so befooled him. In the meantime the man had got the cask marked "Muriate of Soda" opened, and reported that it contained—ha, ha, ha—simply common salt.

"What on earth," wrote Mr. B., to the chemist, "did you send me Glauber salts, Epsom salts, Saltpetre and common salt, for? Do you think I want to pickle and preserve my land, and if I get too much salt and saltpetre, physic it out? Only one of the casks contain what I ordered, and that is the nitrate of soda."

The return mail brought the answer: "Nitrate of soda, of course is right, because it is not known by any other name."

"Glauber salts is, properly speaking, sulphate of soda, and sulphate of magnesia is nothing more nor less than epsom salts."

"Salt, as we use the term, is salt, but it is a very unmeaning term, among so many salts. Muriate of soda is the right name of our common, or table, salt."

"And nitrate of potash is nothing but saltpetre; don't be afraid of it—it won't explode."

"But it did explode," said Mr. Barnum; "it exploded my ignorance. I had studied agricultural chemistry, but I did not know salt nor saltpetre. I do now, and I mean to know that they are good for land."

And we mean that a few thousand other people shall know the same thing. We do know that all these things are good and very cheap manures.

The same paper gives us, also, this sketch of the mode of plowing at "Iranistan," the country seat of the great humbug "showman."

SEEING THE ELEPHANT.—Passengers who travel by the New York and New Haven cars have a grand chance of "seeing the elephant." Going from New York, the cars pass the farm of P. T. Barnum, a mile or so before reaching Bridgeport, Ct. On that farm, and in plain view from the railroad, an elephant may be seen every pleasant day, attached to a large plow, and doing up the "subsoiling" in first-rate style, at the rate of about three distinct

double-horse teams. The animal is perfectly tractable. His attendant rides him, while a colored man guides the plow. The elephant is also used for carting large loads of gravel in a cart arranged purposely for him, and in drawing stone on a stone-boat or drag, in piling up wood, timber, &c., and in making himself generally useful.

DEPTH OF SOIL—ITS IMPORTANCE.—If 50 be assumed as the value of a given soil, when it is six inches deep, its value, when of different depths is estimated by Thier as follows:

If 3 inches deep it is worth.....	38
4 " " "	42
5 " " "	46
6 " " "	50
7 " " "	54
8 " " "	58
9 " " "	62
10 " " "	66
11 " " "	70
12 " " "	74

Hence, each man may make an estimate for himself, with regard to every variety of his soil, whether the cost of increasing its depth will equal or exceed its value, after the task is completed. It is certain that all situations will not return the amount required to render them fertile to a considerable depth.

Horticultural Department.

WORK FOR THE MONTH—(JUNE.)

[JUNE (Latin, *Junius*) was from *Junio*, one of the fabled goddesses of the Romans, and wife of Jupiter, their chief deity. It answers to the Jewish *Tammuz*, the *tenth* of their *civil*, and *fourth* of their *sacred* year. It had several names with the Saxons, as the *Sere-monath*, or *Dry-month*; the *Aerra-Litha*, or *Former-mild-month*, and also the *Midsummer*, or *Midsummer-month*.]

THE PLANTATION.

CONTINUE to plant Corn at all favorable opportunities, plowing up deeply a few acres after every rain, and putting it into the ground in the best manner. Ourselves and many others in various parts of the country, made very fair crops last year after the "latter rains" of June and July—but the sooner you plant now the better. After the first hoeing, give your corn a top-dressing of Gypsum, Ashes, and Salt—10 parts of the first, 4 of the second, and 1 of Salt. It will be of great benefit in a dry season, and no injury at any time. Try it, if you can obtain the Plaster. (See remarks on Plaster or Gypsum, in Answers to Inquiries.) Work your early Corn as often as possible, giving the roots a deep mellow bed in which to extend themselves, and leaving the surface level and well pulverized.

Plant plenty of *Cow Peas*, using Plaster as a top-dressing, after they are well up. It will act like magic on lands deficient in lime. Plant, also, plenty of Pumpkins among your Corn, or in a separate patch. Milch cows and hogs relish them greatly, and they are quite fattening when boiled up with meal or bran.

Cotton will need constant and unremitting attention during the present month. Scrape and mould the plant as soon as possible; keep the weeds down, and the ground in a state of fine "tilth."

Sow, in the drill, in your richest land, large quantities of Corn and Millet for fodder, Sweet Potato Slips should

be transplanted now as soon as possible. Dip the root in a thick batter—made by stirring fine leaf mould and scrapings from the cow pen into water—plant them pretty deep and shade the ground around them with a few handfuls of leaves, and they will "grow off" finely, even in this thirsty weather. Just before sundown is the best time for this operation with "slips." Wheat, Oats, and early Millet may now be cut, and stacked up carefully on a platform of rails raised several inches above ground; or, (which is still better) put under cover immediately.

THE KITCHEN GARDEN.

Little can be done, the present month in the Garden, with the exception of *mulching*, *weeding* and *watering*. We regard the first operation (*mulching*) as of paramount importance in this climate, and have spoken of it more particularly elsewhere. *Mulch* everything—trees, shrubs, vines and vegetables—covering the surface of the earth, as far as the roots extend, with four or five inches of pine straw, chip mould, spent tan, sawdust or forest leaves—and you will find that trees and plants thus treated grow much faster, and receive little or no check from the long continued drouths of mid-summer. Water should now be freely and regularly applied to all your growing vegetables, in the manner heretofore directed—leaving no moisture exposed on the surface to the sun's baking rays. This is an excellent time to attack the weeds, and you must show them no quarter. Cut them down and let them die on the surface; or, dig them up, and burn them, root, branch and seed. Seeds of Cabbage, Cauliflower, Celery, &c., may be sown under low arbors, made of brush and pine tops, in order to shelter them from the fierce rays of the sun. Water often, until the plants are well up, when a little liquid manure may be used alternately with the water, from time to time. Plant a full crop of Okra, without delay. Plant Peas and Sweet Corn and Snap Beans, for a succession. Transplant Tomatoes, Cabbages, early Celery, &c., &c., and prick out Celery, Cauliflowers and Brocoli. Pinch off the leading shoots of your early Tomatoes, Lima Beans, Melons and Cucumbers, if you want the fruit to set early; and give the plants liquid manure if you desire large specimens. Strawberry Beds must be kept free from weeds, well mulched with leaves or "broom-straw" and freely watered in dry weather. If you desire fruit, cut off all the runners as fast as they appear, and keep the ground cool and moist. But if you wish to increase your plants, the mulching may be dispensed with (except immediately around the plants as directed last month) and the surface must be kept clean, open and mellow.

THE ORCHARD.

The frost has thinned out most of our fruit very thoroughly, but such of our readers as are more fortunate, should not allow their young trees, especially, to bear too heavily—thin the fruit from one-third to one-half, if the branches are heavily laden, and the remainder will be enough larger and finer to pay for your trouble. Peaches, Plums, Nectarines, Apricots, &c., may now be budded, by those who still practice budding, which we have discontinued, except in particular cases; preferring to graft into good roots during the winter. Such as desire to bud the Apricot, may use free growing and vigorous stocks of the Chickasaw Plum with decided advantage, but the tree must be trained low and branching, instead of tall, slender and "spindling." Mulch all young trees set out last spring, and give them a copious watering occasionally. Turn your small "shoots" into the orchard to devour fallen fruit, and encourage them to "root," or loosen up the earth, by scattering a handful of corn to them occasionally, underneath the trees. Large hogs are frequently destructive to orchards, tearing and mutilating the branches in their efforts to obtain the fruit, even when the ground is thickly strewn with it.

THE FLOWER GARDEN.

Some hardy *Annals* may yet be sown, but it is rather late. Take up bulbous roots, such as *Tulips*, *Jonquills*, &c., as soon as the leaves decay—dry and store them. Apply liquid manure occasionally to all your choice flowers. *Roses* should now be budded and layered—fumi gate with tobacco smoke to destroy the Aphis or Green fly upon the Rose and other plants. Gather ripe flower seeds in dry weather. Use water freely among your flowers whenever it is necessary. Rain water is best.

TSING-MA (CANNABIS GIGANTEA.)

EDITORS SOUTHERN CULTIVATOR—This kind of hemp, recently introduced from China, is surpassing all other varieties of hemp in luxuriance. The lint is much finer and better than that of the well known Italian hemp, and can be spun as fine as flax. It has lately been introduced into France, where, however, the summers are not long enough to ripen its seed. I grew it last summer, and thought it was planted late, and the summer was exceedingly dry, I obtained ripe seed without difficulty, though the season was too unfavorable to give it a fair trial. I consider it a valuable acquisition for the hemp-growing districts of the South.

ROBERT NELSON.

Macon, Ga., April, 1855.

PHYSALIS EDULIS.

EDITORS SOUTHERN CULTIVATOR—Several species of this genus are common weeds in the high, dry, sandy lands in Georgia and South Carolina. The *Physalis Alkekengi* is considered very unwholesome. The above-mentioned species is a native of Peru, where it is a perennial plant, too tender, however, to endure our winters; but when treated as an annual, it will grow here as easy as a Tomato. It forms a neat little bush about two feet high, blooming and bearing fruit all the summer. The fruit is a yellow berry, about the size of a cranberry, enclosed in an inflated calyx, whence its botanical name. Partaking of the flavor of the Guava and the Pine-apple, it is a most delicious fruit for pies. When gathered and put aside, it will keep during the whole winter in fine condition for use. Being of easy cultivation, I am confident that this plant will soon become as indispensable in our gardens as the Tomato.

ROBERT NELSON.

Macon, Ga., May, 1855.

FRUITS FOR THE SOUTH—PEACHES.

EDITORS SOUTHERN CULTIVATOR—In the March number of the *Horticulturist*, a list of such fruits is found, as have been recommended by the "North American Pomological Society" for general cultivation in the different States. But, alas! how very deficient is that list in regard to the Southern States!

Having devoted my attention for years to the cultivation of fruits in Georgia, I would feel highly gratified if my experience should be acceptable to the public. I will, therefore, (if you will allow me a little space in your columns*) occasionally, give you a list of such fruits as I confidently can recommend. I admit, however, that I feel diffidence in my capability, and would be very glad if a more able pen would undertake the task, which, be fore long, must be of great importance to the South.

It is now a well established fact, that Georgia, and the Southern States generally, are well adapted to the cultivation of the fine-t fruits, and in a short time we will have collections of the finest varieties of native Southern fruits,

*Shall always be glad to receive any communication on this or kindred subjects from your experienced and able pen.—EDS.

as yet unknown in the North. The time, also, is not very distant, when the South will be independent of Northern Nurseries.

I will, however, at present confine my remarks to the Peaches. No country can boast of a better climate for this splendid fruit than the Southern States, where Peaches for five months, or from May until frost, can be grown in the highest perfection, and of such exquisite flavor, as to throw the far-famed New Jersey peaches in the shade.

In making out a list of Peaches to be recommended for general cultivation, distinction should be made between those that are to be grown for market, and such as are intended for family use, as some of our finest Peaches are not firm enough to bear carriage.

A collection of Peaches, ripening in succession for five months, must necessarily embrace more than the fifteen varieties enumerated in the above-mentioned list, which, also, contains some which I have rejected a long time ago; while it omits several very valuable ones; besides, the latest peach mentioned in that list, is the "Heath" cling, which is ripe here by the 25th of August. From that time, and until frost, we still have at least two pretty hot months, during which every person would relish a good and luscious Peach. For such late varieties, we must look entirely to Southern Seedlings; and we have them, large, juicy and luscious, though strange enough, good varieties are more plentiful in October than in September.

When the Peach orchards of Delaware, for the supply of the Northern markets, were first started, few persons only could form an idea of their success and profit. Since then, railroads and steamboats have brought Georgia in close and easy connection with the large Northern markets. An immense wealth is opened for us in those markets, which are never to be overstocked before the month of August; and yet how very few persons are ready to profit by the great advantages of which we are in possession!

In growing Peaches for the Northern markets, the main object is to have *early* varieties which are firm enough to bear carriage, so as to reach market in good saleable condition. On the other hand, our fine *late* peaches would not be duly appreciated in the North; for who would relish a Peach when the weather is cold and frosty? but they will be very valuable in our Southern markets. They will become a source of great profit in such latitudes as are laying convenient for the New Orleans or Mobile markets; besides, they will become indispensable for preserving.

It is my great ambition never to raise any but first-rate articles; and, following the advice of my lamented friend, A. J. DOWNING, I shall never go in for the largest number of varieties, (which I must consider a great folly), but for the best and most choice collection; no trouble or expense are, therefore, regarded in my Nursery.

This time, I will only mention a variety of the Peach, which, though it is not the *very* earliest, and never yet has been brought into notice, still, in my opinion, is of great importance for a Southern fruit grower—a Peach, which is deserving of the most extensive cultivation, it is the

"FLEWELLEN" PEACH.

This noble fruit probably originated in Middle Georgia (latitude 33 deg.), where it already has been grown for many years, particularly by the late Gen. FLEWELLEN, from whom it takes its name. It evidently belongs to that class, which, in the South, is known as "Indian Blood" Peaches; a fruit now seldom to be met with of good quality.

Fruit large, somewhat compressed at the top; skin very deep dull red; flesh deep red, exceedingly juicy and refreshing, with a high vinous flavor. It ripens here by June 25th to July 1st, or a week after the "Early York,"

thus about six weeks earlier than the "Indian" Peach. It is, unquestionably, the best and earliest clingstone in this latitude. It is, like all clingstones, very firm, and will bear shipping well.

The tree is of luxuriant growth and a regular bearer.

ROBERT NELSON.

Macon, Ga., May, 1855.

[From the Chronicle & Sentinel of May 17.]

AUGUSTA FRUIT IN CHARLESTON.

We find the following notice of Mr. REDMOND's fine Strawberries in the Charleston *Courier* of Monday last:

"We received on Saturday a specimen box of most luscious strawberries, from the 'Fruitland Farm' of D. Redmond, Esq., Editor of the *Southern Cultivator*, near Augusta, Ga. We are gratified to learn that it sufficient encouragement be afforded him, Mr. Redmond intends to keep our market fully supplied with this delicious fruit during the season, at reasonable prices, and we are confident that if all his strawberries are of the same quality sent us, the supply will scarcely equal the demand."

The Charleston *Standard*, of yesterday, also says:

STRAWBERRIES.—We have received from the editor of the *Southern Cultivator*, at Augusta, Ga., a mess of most delightful Strawberries. They were from his "Fruitland Farm," near that city, and with proper encouragement, it is proposed to supply our city with this delicious fruit. We commend his efforts to the favor of our citizens, and can say that the samples which we had were truly fine.

Mr. R. has given this delicious fruit particular attention for a few years past, and has now in cultivation several acres, embracing more than *thirty* of the choicest varieties. Not more than eight or ten varieties, however, are fully worthy of general cultivation; and these Mr. R. intends to propagate largely. He has handed us a select list of the following varieties, a further account of which will appear in the July number of the *Southern Cultivator*.

STRAWBERRIES FOR GENERAL CULTIVATION.—*Hovey's Seedling*, (pistillate)—very large, fine and productive; *McAvoy's Extra Red*, or No. 1, (an enormous bearer, fruit large, and of fine flavor—pistillate); *Crescent Seedling*, (very large, prolific, a little tender—pistillate); *McAvoy's Superior*, (extra large, a good bearer, hardy—pistillate—received \$100 prize from the Cincinnati Horticultural Society, in 1851); *Burr's New Pine*, (medium size, delicious flavor, rather too soft for marketing—pistillate.)

As IMPREGNATORS FOR THE ABOVE, Mr. R. prefers the *Large Early Scarlet*, (staminate) and the *Boston Pine*, (also staminate.)

FOR THOSE WHO CULTIVATE BUT ONE VARIETY, *Longworth's Prolific*, an hermaphrodite variety of superior excellence, is confidently recommended.

FOR AMATEURS, WHO DESIRE VARIETIES.—All the above, and the following: *Moyamensing Pine*, (pistillate); *Walker's Seedling*, (staminate); *Crimson Cone*, (pistillate); *Jennet's Seedling*, (pistillate); *Large White Bickon Pine* (staminate); and *Black Prince*, (pistillate.)

STRAWBERRIES.—We were presented on Saturday last by Mr. D. Redmond, of Augusta, Ga., Editor of the *Southern Cultivator*, with a sample of Strawberries, which he is disposed, if properly encouraged, to supply plentifully and cheaply to our citizens. The berries, we are informed, are picked from the vines directly into quart boxes, and they are not handled again until they reach the purchaser. We found the samples to be of good size, of exquisite flavor, and in admirable condition, and we wish Mr. Redmond every success in his efforts to introduce this fragrant luxury among us.—*Charleston Mercury* of May 14.

GREENS—AND BACON.

EDITORS SOUTHERN CULTIVATOR.—What a terrible drouth! all gardens parched up, and it is almost impossible to gather a good mess of "greens." But noticing this great calamity all around me, I would draw the attention of the

public to a few plants, which, although not new, still are not in such general use, as they ought to be:

RAPE, (*brassica napa*.)

Mr. LANDRETH, in his catalogue of vegetable seeds, is evidently laboring under a great error when he says: "It is grown in Southern gardens under the name of *Collards* or *Greens*, but is but a poor substitute for head cabbage." Surely the Rape is an excellent vegetable in its season, and is sold in immense quantities in the European markets in the spring, a long time before the cabbage comes into use. Again, *Rape* is entirely different from the *Collard* of the South. The true rape is grown extensively in Europe for the oil which is pressed from its seeds, and is considered one of the most profitable crops a European farmer can raise. The seed, sown on rich ground in rows, 15 inches apart, in the months of October and November (in the northern part of Europe it is sowed in August and September) will come up readily and grow luxuriantly, being hardy enough to stand our winters. When the top is about 6 inches high, it is fit for cooking; and if cut down a couple of inches above the ground, so as not to injure the very heart, the Rape will, in about two weeks, (according to the season) have grown sufficiently to admit of another cropping, and soon until April, when it will run into seed. When sown early in spring, say January or February, I have often had it ready for cutting in 4 weeks from the date of sowing, and then it will never run to seed. In fact, it furnishes an excellent substitute for cabbage until the latter comes in. A variety of it has been introduced lately under the name of "Colza," (a corruption of its German name, Kohlsaas) but the difference is very slight. The Rape will also be found of great importance in agriculture, furnishing an excellent winter forage for cattle.

LETTUCE.

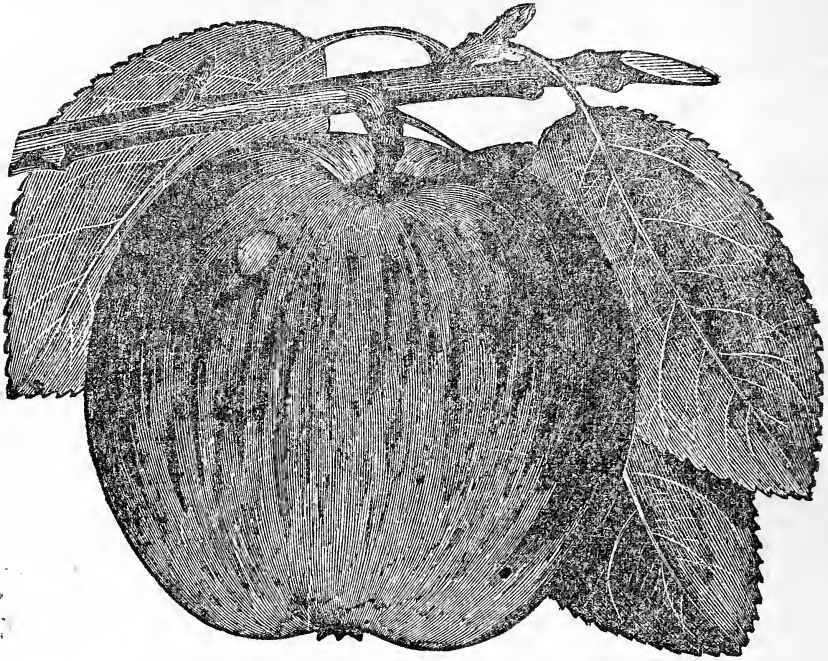
The season for lettuce is a very short one in the spring, mostly because the proper way of using it is not generally known. Many new vegetables are introduced, puffed and sold at high prices, not half so good as this invaluable old customer in every garden. The lettuce, when *cooked*, is, in my opinion, one of the finest "greens" in the spring, and I am confident that no person, who tries it once, will ever give it up again. During the hot season, when the whole cabbage tribe is infested with myriads of insects, the lettuce is never liable to similar attacks. It is true, the lettuce will soon run into seed during the summer, but even the flower-stem, when nearly a foot high, and before the top is spreading, is, in flavor, so much like an asparagus that it hardly can be distinguished. In short, the lettuce is an excellent, palatable and wholesome vegetable, which ought to be grown extensively for *cooking*. In fact, it spreads so much and sows itself so readily, that it is almost equal to weeds, and can be had nearly all the year round.

NEW ZEALAND SPINAGE (*tetragonia expansa*.)

It is surprising that this vegetable, by which the celebrated Captain Cook saved his crew from scurvy, and which already was cultivated in England in 1772, as yet seems to be almost unknown here in the South; it is even not to be found in any of the seed catalogues of the North. The warmer the weather the better it grows, even fully exposed to the sun. It is of a trailing habit, with very thick, succulent leaves, and never troubled by insects. The leaves are the eatable part, and can be gathered very often. In fact, a bed of twenty plants, in good rich soil, will give a daily supply to a pretty large family, particularly when it grows where it can find some moisture in the bottom. Planted by the 1st of April in hills, 3 feet apart.

ROBERT NELSON.

Macon, Ga., April, 1855.



HUBBARDSTON NONSUCH APPLE.

This is one of the few Northern Apples that may be considered worthy of a place in the catalogues with our Southern Seedlings.

DOWNING says of it:—"A fine, large early winter fruit, which originated in the town of Hubbardston, Mass., and is of first-rate quality. The tree is a vigorous grower, forming a handsome branching head, and bears very large crops. It is worthy of extensive orchard culture. Fruit large, roundish oblong, much narrower near the eye. Skin smooth, striped with splashes, and irregular broken stripes of pale and bright red, which nearly cover a yellowish ground. The calyx open, and the stalk short, in a russeted hollow. Flesh yellow, juicy, and tender, with an agreeable mingling of sweetness and acidity in its flavor. October to January."

"RED WARRIOR" APPLE.

EDITORS SOUTHERN CULTIVATOR—This splendid Southern apple was first found in the orchard of Mr. GRAHAM, of Coosa County, Alabama, and scions of it were sent to me by that indefatigable pomologist, Dr. W. O. BALDWIN, of Montgomery, Alabama. The fruit is very large, often measuring fourteen inches in circumference, and covered nearly all over with deep red. It is juicy and well flavored, and fit for the table from November till January.

ROBERT NELSON.

Macon, Ga., 1855.

Domestic Economy and Recipes.

STRAWBERRIES AND THEIR PRESERVATION.

We find the following seasonal recipes in the May number of GODEY'S *Lady's Book*:

TO BOTTLE FRUIT.

Cherries, strawberries, sliced pine-apple, plums, apricots, gooseberries, &c., may be preserved, in the following manner, to be used the same as fresh fruit:—Gather the fruit before it is very ripe; put it in wide-mouthed bottles made for the purpose; fill them as full as they will hold, and cork them tight; and seal the corks; put some hay [broomstraw will do] in a large saucepan: set in the bottles, with hay between them, to prevent their touching; then fill the saucepan with water to the necks of the bottles, and set it over the fire until the water is

nearly boiling; then take it off; let it stand until the bottles are cold; then keep them in a cool place until wanted, when the fruit will be found equal to fresh.

STRAWBERRIES PRESERVED.

Strawberries for bottling, or preserving, except for jam, should be ripe, but not in the least soft. Make a syrup of a pound of sugar for each pound of fruit. The sugar should be double-refined, although refined sugar does very well; the only difference is in the color of the preserve, which is not so brilliant when done with other than crushed or loaf sugar. To each pound of sugar put a teacup of water; set it over a gentle fire, and stir it until it is all dissolved; when boiling hot, put in the fruit, having picked off every hull and imperfect berry; let them boil very gently in a covered kettle until, by cutting one open, you find it cooked through. That will be known by its having the same color throughout. Take them from the syrup with a skimmer, and spread them on flat dishes, and let them remain until cold; boil the syrup until quite thick; then let it cool and settle; put the fruit into jars or pots, and strain or pour the syrup carefully over, leaving the sediment, which will be at the bottom of the pitcher. The next day, cover with several papers wet with sugar boiled to candy; set them in a cool, airy place. Strawberries keep perfectly well made with seven pounds of sugar to ten of fruit; they should be done as directed above, and the syrup cooked quite thick. A pint of red currant-juice, and a pound of sugar for it, to three pounds of strawberries, make the syrup very beautiful.

STRAWBERRY JAM, OR MARMALADE.

Pick ripe strawberries free from every hull; put three-

quarters of a pound of sugar to every pound of fruit; crush them together to a smooth mass; then put it in a preserving kettle over a gentle fire; stir it with a wooden or silver spoon until it is jelly-like and thick; let it do slowly for some time, then try some on a plate; if, when cold, it is like jelly, it is enough. Put it in small jars or tumblers, and secure as directed. Currant-juice, with a pound of sugar to a pint, to four or five pounds strawberries, and the required quantity of sugar, makes the jam very nice. Half a pound of sugar for each pound of fruit will make very fine jam, or marmalade, which is the same, cooked until it is very thick, and reduced; take care that it does not burn.

TO PRESERVE STRAWBERRIES WHOLE.

Another excellent way is to make the syrup boiling hot; and having picked fine, large strawberries free from hulls (or, if preferred, leave them and half an inch of the stem on,) pour it over them; let it remain until the next day, then drain it off, and boil again; return it hot to the fruit; let them remain for another night; then put them into the kettle and boil gently for half an hour; cut one in two; if it is done through, take them from the syrup with a skimmer, and spread them on flat dishes to cool; boil the syrup until thick and rich; then put the fruit into glass jars; let the syrup cool and settle; then pour it carefully off from the sediment over the fruit.

STRAWBERRIES STEWED FOR TARTS.

Make a syrup of one pound of sugar and a teacup of water: add a little white of eggs; let it boil, and skim it until only a foam rises; then put in a quart of berries, free from stems and hull; let them boil till they look clear, and the syrup is quite thick. Finish as directed for tarts, with fine puff paste.

SOAP, WHITE LEAD AND OIL.—*Mr. Editor*—It is not so generally known as it should be, that a mixture of the above named ingredients makes an excellent coating for gates, fences and out-buildings. The addition of the soap (soft soap only is to be used) considerably diminishes the expense of the paint, without, in any degree, lessening its durability, or the facility of laying it on.

I have a house, the north-west side of which was painted with this mixture nineteen years ago, and the paint is now much more brilliant than that put upon the other sides at the same time, though the latter was of the best quality of white lead and oil, and four heavy coats applied, while the soap paint I applied but two. Fences painted with this mixture, as well as the roofs of buildings, for which purpose any coloring matter, or pigment may be substituted for the lead, endure much longer, it is ascertained, than those painted with pure oil paint. The alkaline qualities of the compound render them impervious to the atmospheric influences which are the chief causes of decay and rot. The quantity of soap to be used can be best ascertained by experience; on this point no definite rules can be prescribed.—*New England Farmer.*

FRENCH ROLLS FOR BREAKFAST.—1 pint of flour, whites of 3 eggs, table-spoonful of butter, 2 large spoonfuls of fresh yeast; milk enough to make it stiff dough. Let it rise over night.

CURE FOR FOUNDER.—A correspondent of the *Ohio Cultivator* says of a mare he had badly foundered:

"I took her to the well, and bathed her legs and shoulders well in cold water. I then had her bled in the mouth by sticking a sharp knife in the third rib of the roof. She bled pretty freely, swallowing most of the blood, for about one hour. I never saw a stiffer animal attempt to walk. I turned her out again, and the next day she was as well as ever, with no signs of the founder. If the horse is likely to bleed too much, give him some flour or wheat bran to lick."

Advertisements.

IMPORTANT TO PLANTERS.

THE Richmond Factory (Richmond county, Ga.) continues to manufacture WOOLEN CLOTH, for Negro Clothing, at 12½ cents per yard—finding every material except the wool.

Those wishing to avail themselves of this opportunity to procure for their Negroes a superior article of Winter Clothing, have only to wash the wool clean in cold water, and send it to the factory, or to Messrs. SCRANTON, EYMOUR & Co., in Augusta, with instructions as to the amount of Cloth they wish made—whether heavy or light. If the wool be dirty, half a cent per yard will be charged for washing it. Burrs are not objectionable, as a machine is provided for removing them.

Wool is also carried into Rolls, for those who make their Negro, or other Clothing at home.

The terms now offered are so reasonable as to warrant a continuance of the liberal patronage heretofore extended by the planting community.

The Wool should be sent as soon after shearing as convenient, with the name of the owner distinctly marked on the bag or bale, that all the patrons of the establishment may be accommodated in due time.

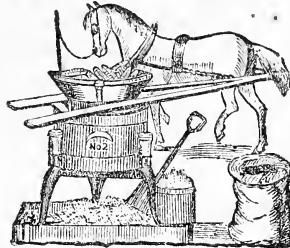
Wool sent by any of the lines of Railroad, in Georgia, or South Carolina, or by steamboat on the River, directed to "Richmond Factory care of SCRANTON, EYMOUR & Co.," will meet due attention, and the Planter will always have his own wool manufactured into Cloth and returned to him.

The highest cash prices will be paid for WOOL.

WILLIAM SCHLEY, President R. Factory.

June 55—4t

SCOTT'S LITTLE GIANT CORN AND COB CRUSHER



THE attention of Planters and Stock-Feeders is respectfully called to this Mill, as the best and most profitable article now in use. In setting up, no mechanical work is required, it being only necessary to fasten it down to a floor or platform.

No. 2 will crush 10 bushels per hour with one horse, and it is sold for \$25, all complete, ready for attaching the horse.

No. 3, at \$65, grinds 15 bushels per hour; and No. 4, at \$75, grinds 20 bushels per hour with two horses.

CARMICHAEL & BEAN, Agents,
Augusta, Ga.

AUGUSTA, GA., April 8, 1855.

I have been running one of Scott's Little Giant Corn and Cob Mills, No. 4, for the last five weeks, and it performs to my entire satisfaction. It was warranted to grind 20 bushels per hour, but I have ground over 35 bushels in an hour and a half, or equal to 23½ bushels per hour. In feeding 80 horses, I save at least 100 bushels of Corn per month, it now requiring only 200 bushels of Corn with the cob, where I formerly fed 800. I consider it decidedly the best kind of Crusher ever got up, and if I could not replace mine I would not sell it for \$500.

June 55—tf

I. D. MATHEWS,
Proprietor of the Augusta Omnibuses.

P. D. GATES,

COMMISSION MERCHANT,

AND Dealer in AGRICULTURAL IMPLEMENTS and MACHINERY, No. 12 Broadway, New York.

Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Powers and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines.

June 55—Cly*

DOMESTIC ANIMALS AT PRIVATE SALE.

J. G. MORRIS' Illustrated Catalogue, with prices attached, of short Horned and Devon BULLS, and Bull CALVES; a few HORSES; South Devon RAMS; Berkshire, Suffolk and Essex SWINE, will be forwarded (if desired) by addressing L. G. MORRIS, Fordham, Westchester county, N. Y., or A. J. BUCAR, 187 Broadway, N. Y. It also contains portrait, pedigree and performance on the Turf of the celebrated horse, "Monarch," standing this season at the Herdsdale Farm.

June 55—tf

CATAWBA GRAPE VINES.

ROOTED VINES of three years old, raised by Mr. Charles Axt, may be obtained by Addressing

D. REDMOND,
Augusta, Ga.

Feb 55—tf

ALBANY AGRICULTURAL WORKS,

ON Hamilton, Liberty and Union streets; Warehouse and Seed Store, removed to No. 52, State street, Albany, N. Y. The proprietors of the above named establishment being the sole owners and manufacturers of EMERY'S PATENT HORSE POWER, &c. All arrangements with their parties for their manufacture having expired, have formed a new copartnership, under the firm name of EMERY BROTHERS, and will continue the manufacture and sale of AGRICULTURAL IMPLEMENTS AND MACHINERY, as heretofore, at the old stand, of EMERY & Co. By this arrangement the united efforts and interests of the Brothers, long known to the public, are secured, and no exertions will be spared to meet the wishes of those dealing in and using the class of implements they manufacture their leadng branch being the manufacture of the justly celebrated EMERY'S PATENT CHANGEABLE GEARED RAILROAD HORSE POWERS, with the Machines to be propelled by it, as Threshing Machines, Saw Mills and Machinery generally.

These Powers having been submitted repeatedly to the most severe tests and trials to determine their relative merits and utility with those of every known manufacture, have, without exception, been awarded the highest prizes for superiority—among which were the following:

N. Y. State Ag'l Society, 1854, 1853, 1852, 1851, 1850; Ohio State Board of Agriculture, 1854, 1853, 1852, 1851; Michigan State Agricultural Society, 1853, 1852, 1851; Indiana State Agricultural Society, 1853, 1852, 1851; Illinois State Agricultural Society, 1853; Pennsylvania State Agricultural Society, 1853; Maryland State Agricultural Society, 1853; Missouri State Agricultural Society, 1853; American Institute, 1852, 1851; New York Crystal Palace, 1853; Canada Provincial Society, 1852, 1851; Connecticut State Agricultural Fair, 1854.

WARRANTY, CAPACITY, ECONOMY, &c.—The Two Horse Power and Thresher, is capable with three or four men, of threshing from 17½ to 225 bushels of wheat or rye, and the one horse power from 75 to 12½ bushels of wheat or rye; or both kinds of powers, &c. are capable of threshing double that amount of oats, barley or buckwheat, per day, of ordinary fair yield. If the crops be extraordinary heavy or light, greater or less results will follow.

These Powers, Threshers, &c., are warranted to be of the best materials and workmanship, and to operate as represented by this Circular, to the satisfaction of the purchasers, together with a full right of using them in any territory of the United States, subject to be returned within three months and home transportation and full purchase money refunded if not found acceptable to purchasers.

The public may rest assured the reputation he therefore earned for our manufacture, shall be fully sustained, by using none but the best material and workmanship; and by strict attention to business, they hope to merit and enjoy a continuance of the patronage heretofore so liberally bestowed, which we respectfully solicit.

N. B. All articles bear the name of "EMERY" in raised letters upon the cast iron parts, and however much others may resemble them, none are genuine without this mark.

Full descriptive illustrated price catalogues sent gratis on application. **EMERY BROTHERS.**

Albany, N. Y., March 15, 1855.

April—3m

PURE DEVON AND GRADE CALVES FOR SALE!



ONE very beautiful thorough-bred NORTH DEVON HEIFER CALF, 5 months old—sire, "Keokuk," dam, "Lively Dame"—for pedigrees of which see September number (1853) *Southern Cultivator*.

Also, a number of grade or half blood heifer and bull CALVES, of 1854, various ages—all from good native cows, and sired by premium bull "Keokuk," purchased from the Messrs. WAINRIGHT by Judge WARREN. For particulars, &c., Address **D. REDMOND,** Augusta, Ga. May 55—1f

SUPERIOR THOROUGH-BRED DEVON CATTLE, AND

ESSEX PIGS, FOR SALE!

THE Subscriber having this day purchased from Dr. W. P. Wainwright, his interest in the herd of DEVON CATTLE, hitherto owned conjointly by them, will continue to give his strict attention to the breeding and raising of this increasingly popular breed. Having now a herd of over twenty head, bred entirely from animals of his own importation, he is enabled to offer for sale a few young bulls and heifers of very superior quality.

Also constantly on hand thorough bred **ESSEX PIGS**, descended from the best imported stock. For full particulars as to age, price, pedigree, &c., address **C. S. WAINRIGHT,** Rhinebeck, Dutchess county, N. Y. April—8t

WM ALISTON GORDIN,

FACTOR AND COMMISSION MERCHANT,

CORNER East Bay Street and North Commercial Wharf, Charleston, S. C., is prepared to make liberal advances on consignments of COTTON, CORN, SUGAR, FLOUR, GRAIN, HAY, &c.

Genuine Peruvian Guano Depot!

FARMERS' PLASTER, CHARCOAL, BONE DUST, MINERAL PHOSPHATE LIME, SUPER PHOSPHATE LIME, &c. Always on hand. Sept. '54 1y

CARMICHAEL & BEAN,

DEALERS in HARDWARE, CUTLERY and AGRICULTURAL IMPLEMENTS, Augusta, Ga.

We are, also, Agents for the following articles:—SALAMANDER SAWS, made by Stearns & Marvin, New York; LITTLE GIANT CORN AND COB MILLS; Indian Rubber BELTING, PACKING and HOSE, made by Boston Belting Company; ATKINS' SELF RAKING REAPER; CIRCULAR SAWS, made by Hoz & Co., and Welch & Griffith's HORSE POWERS; FAN MILLS, THRESHERS and SMUT MACHINES. **CARMICHAEL & BEAN.** April 55—Cly

Augusta, Ga,

FOR SALE!

A SEA Island Cotton Plantation, containing 900 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skidaway Island, in Chatham county, on a bold salt water river, the health of which is unquestionable, and the facility for manuring with marsh and mud is unsurpassable, the land lying three miles on the river. The place is situated 1 mile from Savannah. The lands of Skidaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters and for stock raising. Price \$35,000. Terms accommodating. Apply to **S. F. DUPON,** Savannah. April—1f

Isle of Hope March 9, 1855.

F. MCCREERY,

Charleston.

MCCREERY & HOOKE,

R. M. HOOKE,

Chattanooga.

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS.

Brown's Wharf, Charleston, S. C. Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market. Feb 55—Cly

MADAGASCAR OR LOP-EARED RABBITS!

THE Subscriber, according to promise, made some time since, when he advertised applicants (through this paper) that he could not possibly supply them with Rabbits, till the orders on hand were filled, would now inform them that he has a few extra pairs of LOP-EARED RABBITS, of a suitable age for immediate breeding. They are in fine health and condition. Price \$15 per pair, delivered at the American Express office in Utica. **FRANCIS ROTCH.** Morris, Chicago co., N. Y., Feb. 12, 1855. April—3t

FANCY LOP-EARED RABBITS.

A FEW pair of beautiful Lop-Eared MADAGASCAR RABBITS may be obtained by addressing the subscriber. March 55—1f **D. REDMOND,** Augusta, Ga.

GARDEN AND FIELD SEEDS—AGRICULTURAL IMPLEMENTS, &c., &c.

ALSO: COPPER, TIN, BRASS, SHEET IRON STOVES, GRATES, HOLLOW WARE, GAS FITTINGS, &c.

B. S. WELLER, No. 35 Market street, Nashville, Tenn., would respectfully inform the public that he has for sale, on very reasonable terms, a full supply of all the above articles. Also:

POULTRY, such as Shanghai, Black Spanish, Gold and Silver Pheasant, African Bantams, Wild Indian and Sumatra Game, White Guinea Geese, African, Bremen, Hong Kong, White Swan Goose of China. Improved SW FOLK SWINE, &c., &c.

For particulars, address above.

April 5—3t

GREENE'S PURE WHITE WHEAT.

I HAVE a very superior kind of WHITE WHEAT that I will engage to those who may want to purchase for seed wheat of the next year, to be delivered at the La Grange depot in good, strong sacks, containing not more than one bushel unless ordered, nor less than a half; marked with the name of the purchaser and place of delivery. This Wheat is of the very earliest and whitest kind. Sown any time in November, and cut by the 20th of May. It has been exhibited at four different Fairs, and have obtained a premium in every instance. I have already made many engagements for the next sowing at five dollars per bushel. No Delivery no pay.

La Grange, March 22d, 1855.

P. H. GREENE

April 52—1f

CHEROKEE!

A VALUABLE LOT OF LAND FOR SALE.

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this Lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

For terms, &c., apply to the subscriber, or to Col. J. W. M. BELRIEN, of Rome, Ga., who will take pleasure in pointing out the land.

September—1f

D. REDMOND, Augusta, Ga.

RANDALL'S COTTON PLANTER !

PALMYRA, Lee County, Ga.,
March 12th, 1855.

To Cotton Planters.

WE DESIRE to call your attention to a Machine which we have invented and patented for the PLANTING OF COTTON. Its superiority over all others used for a similar purpose, consists in its great simplicity, requiring no more experience for its use than for an ordinary plow; the cheapness of construction, the great saving of time and labor in the planting of the crop, but more especially in the cultivation of it.

The certificates which we herewith present to you are from some of the most respectable and intelligent planters in our country, who have thoroughly tested our Machines, and sustain us in the above statement of the advantages it possesses. We are confident that when presented to the Cotton Planters throughout the Southern States, it will, in a short time, be universally used by them for planting their crops.

In bringing these Machines before the public, we have taken every precaution to free them from the liabilities of being associated with the mass of patented inventions, which do not stand a practical test, and we can assure all who will try them that they will fully equal our representations.

The Machines may be had of the following manufacturers:—
THOMAS J. CHEREY, Augusta, Ga.; BROWN, CLEMENS & Co., Columbus, Ga.; J. H. WATSON, Lee co. Ga.

WM. W. CHEREY, Esq., Albany, Ga., is our only Agent, who will contract for us with parties wishing to manufacture the Machines in any part of the United States. RANDALL & MERCER.

CHARLES RANDALL,
LEONIDAS B. MERCER.

Palmyra, Lee co., Ga., Aug. 10, 1854.

GENTS:—Having planted your entire crops with our Cotton Drill, please give us your candid opinion of the Machines, and particulars as to the advantages to be derived from their use, and oblige,
Yours respectfully, RANDALL & MERCER.
To Messrs. S. D. MCLENDON, WM. H. OWENS, ROBT. LUNDY.

Palmyra, Lee co., Ga., Aug. 12, 1854.

GENTS:—Your favor of August 11th, came duly to hand. In giving you our opinion of your Drills, in the first place we would say, we are pleased in every particular with their operation, and as to the advantages to be derived from their use:—the first is the saving of at least one hundred and fifty bushels of Cotton Seed, in planting each hundred acres; second, a saving of labor in planting, of one horse and hand, planting from eight to nine acres per day, the Machine opening the furrow, dropping the seed and covering as it moves over the ground; third, a more perfect stand may be obtained with your Drill than by planting in the common way; fourth, a saving of at least one-third in the labor of chopping out; fifth, the seed being put in a line not one-half an inch in width, the chopping out can be deferred, until the season for hoeing is passed, without injury to the growth of the Cotton; and being in this narrow line with a sweep or narrow rooter, you can side so close as to cover up the first crop of grass in the Drill without injuring the stand of Cotton in the least. By this close siding nearly all hoe work may be dispensed with, after chopping out. These we consider the principal advantages to be derived from the use of your Drills. On a retrospect of our last year's experience we have no hesitation in saying that any person with your Drills, can cultivate at least twenty five per cent. more Cotton to each hand, with the same labor, than can be cultivated in the common way of planting. We put that at a low figure so that no one can say they have been deceived by us. In the hope that these Machines may come into general use, we subscribe ourselves,
Yours very truly,
S. D. MCLENDON,
WM. H. OWENS,
ROBT. LUNDY.

Albany, Dougherty co., Geo. Aug. 16th, 1854.

GENTS:—Yours of August 14th, with enclosed is before us. In reply we would state that we believe any person using your Cotton Seed Drill will realise every advantage Messrs. McClendon, Owens & Lundy speak of; and we fully coincide with them in their high appreciation of your invention.

Yours respectfully,
J. H. WATSON, Lee co.
DAVIS PACE, Dougherty co.
WM. B. MCLENDON, Randolph co.
B. B. DANIELS, Lee co.
Y. G. RUST, Dougherty co.
JAMES CHEW, Lee co.
JEREMIAH HILLSMAN, Lee co.

To Messrs. RANDALL & MERCER.

Palmyra, Lee co., Aug. 10, 1854.

MESSEES RANDALL & MERCER:—In reply to yours of the 5th inst. in regard to the operation of your Cotton Seed Drill, I am happy to say that after planting a portion of my crop in the old way, I was enabled to obtain one of your Drills, with which I finished. It is what we have long wanted, and the beautiful work it performs has perhaps been attempted in a thousand different ways by intelligent planters, but with only partial success; yours leaves nothing to be desired; it deposits the seed uniformly, and constantly on a line of one to two seeds in width; saves about one-half of the labor in planting, and one-third of the hoe labor in cultivating. All must use this drill in self defence; I shall, for one.

More cotton may be planted and cultivated, and if not the labor saved, may be turned into other channels. Yours respectfully,
April—tf J. L. MERCER.

GEORGIA RAILROAD.



PASSENGER TRAINS.

LEAVE Augusta, daily at 6 P. M. and (Sundays excepted) at 6 A. M.

Arrive at Augusta daily at 4.30 A. M. and (Sundays excepted) at 5 P. M.

Leave Atlanta daily at 6.30 P. M. and (Sundays excepted) at 4.30 A. M.

Arrive at Atlanta daily at 4 A. M. and (Sundays excepted) at 6 P. M.

CONNECTING WITH ATHENS BRANCH.
Arriving and leaving Union Point daily (Sundays excepted) at 11.30 A. M.

WITH WASHINGTON BRANCH.

Leaving Cumming daily (Sundays excepted) at 1.00 P. M.

Arriving at " " 9.30 P. M.

WITH SOUTH CAROLINA TRAINS.

Leaving Augusta daily at 6.30 A. M.

Arriving at Augusta daily at 4.00 P. M.

WITH ATLANTA AND LAGRANGE RAILROAD.

Leaving Atlanta, daily at 4.30 A. M.

Arriving at " " 6 P. M.

WITH WESTERN AND ATLANTIC RAILROAD.

Leaving Atlanta daily at 6.00 A. M.

Arriving at " " 6.00 P. M.

March 55—tf GEO. YONGE, General Superintendent.

EXTENSIVE COLLECTION OF SELECTED ROSES AND SOUTHERN RAISED FRUIT TREES.

AUGUSTA NURSERY.

F. A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Cameia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE, Augusta, Ga.

RICH COTTON LANDS FOR SALE!

THE Subscriber offers for sale Forty Thousand Acres of the most productive COTTON LAND, in the Southern country, situated in the counties of Lee, Dougherty and Baker, in bodies of five hundred and two thousand Acres each, a part of which is partially improved.

For certainty of crops and durability these lands are unequalled in the Southern States. Similar lands contiguous in cultivation, are yielding an average of seven bales Cotton, per hand, for a series of years, and eight to twenty-five bushels Corn per acre.

Terms liberal. If desired, a credit of one to five years will be given.

Albany, Ga., March 15, 1855.

WM. W. CHEREY.
April—tf

THE SOUTHERN NURSERIES,

WASHINGTON, ADAMS CO., MISS.

are now well stocked with all the varieties best adapted to the South, of FRUIT TREES and SHRUBS, VINES, STRAWBERRY PLANTS, &c.; and of ROSES and other ORNAMENTAL SHRUBS and TREES, EVERGREENS, &c., all of Southern growth, and of good size.

The packing is so carefully attended to, that Trees and Plants, Roses, cuttings for hedging, &c., are sent to all parts of the South, with scarcely a chance of their being injured.

Catalogues will be sent on application.

Nov—tf

THOMAS AFFLECK.

AFFLECK'S

SOUTHERN RURAL ALMANAC,

A handsome little volume, full of useful and interesting hints on RURAL AFFAIRS IN THE SOUTH, WILL BE ISSUED AS USUAL ABOUT THE FIRST OF NOVEMBER. Price 10 cents.

AFFLECK'S COTTON PLANTATION RECORD AND ACCOUNT BOOK—New Edition, now ready—No 1, for forty hands or less, \$2 50. No. 2, for eighty hands or less, \$3 00. No. 3, for one hundred and twenty hands or less, \$3 50.

AFFLECK'S SUGAR PLANTATION RECORD AND ACCOUNT BOOKS—No. 1, for 80 hands or less, \$3 00. No. 2, for 120 hands or less, \$3 50.

These Books are now in general use amongst Planters. They will be sent by mail, prepaid and carefully enveloped at the above prices, and when five copies are ordered by clubs, and remitted for, an additional copy will be sent as commission to the individual making up the Club. Orders solicited from Booksellers and other dealers, to whom a liberal discount will be made.

B. M. NORMAN, Publisher,
14 Camp street, New Orleans.

Nov—tf

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DAVY'S DEVON HERD BOOK.

NOW ready, a large supply of both 1st and 2d volumes, bound in one book, and containing all the subjects connected with the Devon Herds of both of England and America, up to the present time, and also, as a frontispiece, the beautiful engraving of the celebrated picture known as the "Quarterly Testimonial," which is a full length portrait of Mr. Fran. J. Quarterly, now living, at 91 years of age. It is also illustrated with two animals, prize-winners in England. Price \$1, and can be had by enclosing the amount to B. P. Johnson, Corresponding Secretary of New York State Society, Albany, N. Y.; Luther Tucker, Editor of the *Country Gentleman*, Albany, N. Y.; Sanford Howard, Boston, Mass.; D. D. T. Moore, Editor of the *W. G. & S. Register*, Rochester, N. Y.; A. B. Allen, Editor of the *American Agriculturist*, N. Y.; Samuel Ands, Editor of the *American Farmer*, Baltimore, Md.; A. M. Spangler, Editor of the *Progressive Farmer*, Philadelphia, Pa.; D. Lee and D. Redmond, Editors of the *Southern Cultivator*, Augusta, Ga.; and Wm. McDougall, Editor of the *Canadian Agriculturist*, Toronto, Canada.

It gives me pleasure to state that Mr. Davy has solicited Mr. S. Howard, of the *Boston Cultivator*, to collect pedigrees and illustrations in this country for the 3d volume, and has authorized Mr. H. to obtain information as to any and all mistakes which may have been made as to the Recording of American Animals in Davy's 2d volume, and such corrections will be made in the 3d volume. The plan proposed is that a copy of all the pedigrees and illustrations collected by Mr. H. as the Editor in America, shall be forwarded to Mr. Davy, and a copy of those collected by Mr. D. will be sent to Mr. Howard in this country. The whole matter will be published in America for our use, and in England for their use, by which means an American and English Devon Herd Book will be united, and the price reasonable, as the expense of English printing and duties will be saved. This concert of action has been brought about by Mr. Davy's good feeling and liberality towards this country and I am only the instrument through which Mr. Davy acts, and from this time forth Mr. Howard will receive all communications on the subject, as will appear by reference to his advertisement.

All Editors who will give the above three insertions will receive a copy of the 1st, 2d and 3d volumes.

June 55—31

L. G. MORRIS, American Agent
for J. Tanner Davy's Devon Herd Book.

1855! 1855!

SOUTHERN CULTIVATOR,

A MONTHLY JOURNAL,

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE

Horticulture, Stock Breeding, Poultry, Bees, General Farm
Economy, &c., &c.

Illustrated with Numerous Elegant Engravings.

ONE DOLLAR A YEAR IN ADVANCE

DANIEL LEE, M. D., and D. REDMOND, Editors.

The Thirteenth Volume will commence in January, 1855.

THE CULTIVATOR is a large octavo of Thirty-two pages, forming a volume of 384 pages in the year. It contains a much greater amount of reading matter than any Agricultural Journal in the South—embracing, in addition to all the current agricultural topics of the day,

Valuable Original Contributions

from many of the most intelligent and practical Planters, Farmers, and Horticulturists in every section of the South and Southwest.

TERMS:

ONE COPY, one year.....\$1 | TWENTY-FIVE COPIES, one year.....\$20
 SIX COPIES " ".....5 | ONE HUNDRED " ".....75

THE CASH SYSTEM will be rigidly adhered to, and in no instance will the paper be sent unless the money accompanies the order. The Bills of all specie-paying Banks received at par. All money remitted by mail, postage paid, will be at the risk of the Publisher.

Advertisements

Inserted at ONE DOLLAR per square of twelve lines, each insertion; One square per annum TEN DOLLARS.

ADDRESS WILLIAM S. JONES, Augusta, Ga.

Persons who will act as Agents, and obtain Subscribers, will be furnished with the paper at club prices.

A RARE CHANCE

For Amateurs, Market Gardeners, or Private Gentlemen.

TO BE SOLD, a Seven Acre TOWN LOT, adjoining the City of Austin, Texas, 900 yards from the Capitol, cornering on College Hill, on which we expect, very soon, to have a College established. The Scenery splendid. About three acres of rich Creek Bottom, the remainder good Upland, with a beautiful situation for building upon, in full view of the Capitol, Treasury and Land Office. A never failing stream runs across the lower end of it, in which is an excellent fall for a hydraulic ram, by which the whole bottom can be irrigated. The nature is surrounded by a substantial fence; a miniature Nursery just commenced, and in a high state of cultivation; a Yard fenced off and a small Frame House built, with a well adjoining, and a stable erected. The whole to be sold on reasonable terms, with all the improvements thereon, and possession given at any time the purchaser may arrange for. Apply, by letter or otherwise, to the subscriber, on the premises, or to Raymond, Freeman & Co., Real Estate Brokers. WM DAVENPORT.
 Austin, Texas, March 20, 1855. June 55—1st

AYRSHIRE HEIFERS FOR SALE

AT \$100 EACH.

HEIFER, "PARAGON," one and a half years old, calved March, 1853; Dam "Princess Mary," grand dam imported "Mary Queen of Scots;" sire, imported bull "Robert Burns." "Princess Mary" gave 18 quarts per day, "Mary Queen of Scots" upwards of 30 quarts.

Heifer, "MARIE LOUISE," one and a half years old, calved March, 1852; dam "Maria Teresa," imported "Germantown," grand dam "Mary Queen of Scots," imported from Scotland; sire, imported bull "Robert Burns." "Maria Teresa" gave 20 quarts per day, "Mary Queen of Scots" gave 31 quarts.

Jan 55—1st

RICHARD PETERS, Atlanta, Ga.

SCOTT'S LITTLE GIANT CORN AND COB MILL.

NO. 3, warranted to grind 15 bushels per hour with one horse, price \$65 all complete, ready to attach the horse. No. 4, grinds 20 bushels per hour with two horses; price \$75.

CARMICHAEL & BEAN, Agents,

April 55—C1y

Augusta, Ga.

FRUIT TREES.

THE subscriber having been engaged for some time in testing Fruits best adapted to the Southern soil and climate, now offers for sale about thirty varieties Northern, and some of Southern, APPLES. Also, PEAR TREES worked on Quince and Pear stocks. Biggareau and Heart CHERRY TREES upon Mahaleb stocks, which alone are found to succeed well here. These Trees have all been grafted and grown in this country, and will be found preferable to those from Northern Nurseries. Prices generally below those of the North.

Catalogues sent gratis on application. Best time for transplanting from November to February.

Clarksville, Ga., Oct., 1853.

J. VAN BUREN.
1st

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., JULY, 1855.

NO. 7.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

AGRICULTURAL ENGINEERING.—IRRIGATION.

A NEW "Cornish Engine" has been put up in the Schuylkill Water Works, Philadelphia. The *Ledger* of that city says, that the builders of the engine guarantee it to perform the work of lifting fifty million pounds of water one foot high with one hundred pounds of coal.

It is our purpose to visit these somewhat famous Water Works soon, to examine in person the actual results attained by the consumption of a given quantity of fuel; for fifty million pounds of water is twenty-five thousand tons of 2,000 lbs. each, and will cover 25 acres one inch deep with water.

Assuming the execution of this Cornish Engine not to be over-estimated in the guaranty, the above stated data are of the highest agricultural importance. Both Irrigation and Drainage are questions first of mechanics and hydraulics; and secondly of dollars and cents. All the food of plants that enters their roots must be dissolved in water and the needed water must go to needy plants, as the latter cannot travel, like cattle, down to a branch to drink. What can scientific Engineering do to help the planter water his crops when they suffer from the lack of it? It has already done something, and it is capable of doing infinitely more. The economical lifting and distribution of water are problems of great and peculiar interest to agriculturists in all warm climates; for the comparatively high temperature of such climates, and the not unfrequent arid state of the atmosphere, combine to render the amount of water evaporated from the leaves and general surface of plants very large. Hence, the demands of nature, under such circumstances, are often pressing, and but scantily met by the supply of water in the soil. In a word, agricultural plants need a great deal more water than they receive to attain their highest, and perfect development.

One inch of water over the whole surface of a field is equal to a first-rate rain; and wood equal to 100 lbs. of coal, say 200 lbs. of seasoned wood, will lift 100 tons of water 25 feet, where that elevation will suffice to spread water over an acre of land.

While some of our readers may irrigate large fields by lifting water only 25 feet, more may do so by lifting it 50 feet. The mechanical power to do this is only 400 lbs. of dry wood per 100 tons of water, equivalent to one inch in depth per acre over the field. Now, it will often pay to consume 800 lbs. of dry wood to lift 100 tons of water 100 feet high, if need be, for one good irrigation of a single acre. One hundred tons of water, so applied in an arti-

ficial shower as to permit it all to soak into the ground about the roots of needy plants, may save a crop that would otherwise be lost. But it will rarely be necessary to raise one's artificial shower 100 feet high, to get the water over the surface of the earth. When the roofs of high buildings and church towers are on fire in cities, it may be necessary that fire engines worked by hand or steam, should rain at an elevation of 100 feet—the water being drawn from a well or cistern. The improvements almost daily made in the handling of water in cities, as in London, New York, Philadelphia, and elsewhere, are worthy of the study of rural economists. In Rochester, where this article is written, a small steam engine has just been put up expressly to extinguish fire in the valuable property within one or two hundred yards of it. This engine will be, doubtless, a profitable working machine, if it shall never be wanted to flood a building which is on fire; and so may be any engine on a farm, when from the abundance of rain it is not often needed for purposes of irrigation.

Near Rochester there is a steam engine of 64 horsepower now at work in the manufacture of brick, draining-tile, and pipes of all sizes for the conveyance of water under ground. The engine drives a horizontal iron shaft 400 yards in length, which works twelve upright iron mills for thoroughly mixing clay, sand, and a little coal-screenings. At this extensive establishment, five men dig and haul the raw material, and manufacture thirteen thousand brick for a day's labor of ten hours. This task is usually performed in less than ten hours. The Company employs \$100,000 cash capital, and is understood to be making money. As yet the demand for drainage tile and pipes for the close conveyance of water is not large, but it is increasing. A single machine does the work, which cost only \$200. The tile and pipe are baked in a large brick oven, heated much like a common brick-kiln, by long narrow arches, with open work at the top, in which wood is burnt. Instead of open ditches, and open mill-races, so liable to be filled with snow and ice in winter, and weeds and leaves in summer and autumn, pipes of eight inches bore, made in two pieces, each a semi-circle, are put down and covered with earth one or two feet, as shall be necessary to escape frost. Where more water is needed at a mill than one large pipe will convey, two or more, of eight inches each, are used. On small streams that often drive over-shot, pitch-back and breast-wheels, the loss of water by evaporation, in long, open ditches, and the liability of their banks to break, are pretty serious evils. Loss, by sinking into the ground and leakage, is another drawback on the value of a lengthened open ditch, where one wishes to save water for mechanical, or other purposes.

No gentleman who has travelled much over the country and observed the present ways and means of attaining both agricultural and mechanical ends, wherein moving water is a material element, can doubt that there is abundant room for improvement. We have seen many places where water-power might profitably both drain land while it was too wet, and irrigate it while it was too dry. How much of our cultivated land is in one or the other of these conditions! Why, then, will not the owners of such lands wisely encourage the study of Agricultural Engineering? It, obviously, seeks to supply food to every plant they grow, in the cheapest way possible. In the next course of lectures, as founded by the munificence of Dr. TERRELL, no pains will be spared to illustrate all the principles of this new science.

After surveying the whole ground, and considering the wants of Southern Agriculture, we feel at liberty to say that an increase of popular knowledge of mechanical, chemical and vital forces in their application to tillage and husbandry, demanding skillful engineering, appears to be most needed at this time. Substantial progress may be achieved in this direction. Water is not only the vehicle for conveying all other alimentary substances, into the roots and circulation of plants, but its own elements actually form nearly one-half of every crop which the farmer or planter labors to produce. Rightly to appreciate the value of water to the cultivator, he should study the fact in all its bearings, that plants elaborate their solids, whether wood, seeds, or fruit, as much from water as from all other sources combined. Of course, without water, no seed can germinate, no plant can gain the thousandth part of a grain in organized growth. It is the *sine qua non*; although it may be in excess in the soil and subsoil. How to dispose of this excess, is a proposition that never fails to lead the writer to the science of rural engineering for its solution. It is rare, indeed, that the water which one may drain from swamps, or wet places, should be allowed to run to waste. It is too valuable for that. Some of the richest and best meadows and corn fields in the United States owe their extraordinary fertility to the salutary influence of water that has leached and washed both the vegetable and mineral substances which lie on, and near the surface of the ground. Water in wells, springs and swamps, is often charged with organic and inorganic elements of peculiar value to soils that need irrigation. Hence, the importance of uniting some knowledge of analytical chemistry with that of civil engineering in the professional education of young planters. Such as appreciate the force of this reasoning, will meet with a cordial welcome at the Georgia University next October, if they can make it convenient to attend.

L.

WHAT SHALL WE DO FOR AGRICULTURE?

D. LEE, M. D., DEAR SIR—Permit me to return my thanks for your response in the *Cultivator*, to my letter in reference to Geological Text Books. I now write for two subjects, which will be briefly stated.

I am solicitous to procure the Agricultural history of Europe—particularly its present state—the causes which have improved it—specific aids of government—how many schools of Agriculture exist in each dominion—their character—how many are supported by government, and at what expense—what public agents and officers each employs in agriculture—their duties and salaries—all other government facilities afforded to agriculture, manufactures and the mechanic arts. I wish to get such books as will give all this information. I have just read, with pleasure and profit, COLEMAN'S Travels in Europe, but his book gives none of the information in regard to government aid except in France. Just at this time we need such information in Tennessee, and I must request you to give me

the titles of such books as contain it, and where they can be had.

The other subject to which I have alluded, is, How are we to make the desired impression on the popular mind, in favor of agricultural reform and elevation? Measures will never be adopted to make this a great agricultural country, and all producers intelligent, till the people call for it at the ballot-box. Private efforts can but produce partial results. For thirty years, men of talent have been exerting themselves, and up to this time their influence has been felt only in their particular districts. They have not yet controlled a single entire State, so far as to make the fostering of Agriculture a leading object of policy. Why is this so? Their doctrines and positions have been correct, and of high national importance; their arguments have been forcibly set forth, but still they have made no popular impression calculated to do much general good. With regret I have seen the fact for years. On the other hand, behold the effect and excitement a politician can get up, by a single stump speech, or a letter published in a newspaper, touching not half the vitally important matter contained in a single article written by many of our agricultural writers. The friends of reform ought to sift this matter, and adopt such a course as will produce general effect.

I have thought that a part of the failure is because we confine our publications to the agricultural journals, and that all appeals to the people ought to be made through the political newspapers. I think your articles, published some time since in the *National Intelligencer*, had more influence on the popular mind than all your able editorials in agricultural journals, for years. For the last six months, I have been writing upon agriculture for three of the political papers of Nashville, and can see that I have thus had more influence than I had produced in twenty years by occasional communications to agricultural papers.

But there is another and perhaps greater reason why we have had so little popular influence, *we have had no political platform*. Agricultural reform must be made a political measure; we must have an *agricultural party*; politicians must see that they can elevate themselves by the study and advocacy of government measures to foster agriculture. One single great orator, who would espouse the cause in good earnest, could do more with popular sentiment than all of us who write for agricultural journals, and such a course would place him in any public station he might desire. If we could wake up and rouse some HENRY CLAY or DANIEL WEBSTER, to engage in earnest in this matter, he alone could revolutionize popular sentiment in a short time. Cannot the friends of the cause find a suitable man, who is able to defend, and willing to stake his prospects on it? Can we not, in all our agricultural meetings, call out politicians, and pass resolutions to sustain none but those who will support our positions? And can we not thus rally the farmers generally?

But what will be our platform? I think the following will embrace the positions of most of us:

1. A republican government holds out Equality, Liberty, and Justice, alike to all. This is its theory.
2. Our government ought to be in practice what it is in theory. If it has protected, stimulated, and aided commerce with millions of dollars from the treasury, and to some extent done the same thing by duties, discriminating in favor of manufacturers, while nothing has been done for agriculture, this is a distinction, an unjust inequality in practice, which ought not to be tolerated by the farmers.
3. A wise policy demands that the government shall stimulate and aid each of the three great branches of production: 1st, in proportion to its national importance; 2d, in proportion to the number of producers employed in it;

and 3d, in proportion to the aggregate capital invested in its operations.

4. The agriculture of the Union employs 11-14ths of the national capital, and consequently furnishes 11-14ths of the revenue, while 4-5ths of our productive population are farmers. In view of these facts, their receiving no aid from the treasury, which they mainly furnish, while the other classes, who pay but little, are so freely and liberally aided, the inequality and injustice of such practices are intolerable, because it is double-dealing.

5. In view of the rapid decline of our soil, if a policy be not soon adopted to husband its productive powers, and educate the productive classes, our nation as a mass, will relapse into poverty and ignorance; and two of the great elements of national strength and power will soon be gone, namely, the intelligence and wealth of the people; and however numerous our population may be, it will be weak, and, therefore, an easy prey to foreign ambition.

6. The most important duty of our great statesmen is to develop and preserve the agricultural resources of the country, and offer such facilities as will educate and elevate all classes of producers.

If we can get candidates for office to stand on this or some similar platform, popular sentiment will be speedily changed, our legislation will comport with our highest interests, and our nation will become the most prosperous and powerful on earth.

I hope the Agricultural Convention, to meet in Washington City next February, in adopting a platform, will also resolve to support no politician who will not sustain its platform.

Respectfully,

F. H. GORDON, M. D.

P.S.—I hope to hear from you soon on both of the subjects herein embraced.

Sugar-tree Farm (near Rome),

Smith Co., Tenn., May 25, 1855.

REMARKS.—In wishing to procure a history of the present state of Agriculture in Europe, our friend desires a work which we fear has yet to be written. Dr. HITCHCOCK, President of Amherst College (Mass.) visited England and the Continent a few years since, and made special inquiry in reference to the number and character of Agricultural Schools in Europe, the results of whose investigations were embodied in a report of the State Board of Agriculture to the Legislature. We will endeavor to procure a copy of this document for Dr. G. There were at that time 153 Agricultural Schools in Europe, which were generally known, and perhaps half as many more not known, out of the neighborhood of each. In France, there is a government minister of agriculture; and much attention has been given to agricultural statistics and education. One must look through French agricultural journals and public documents to glean the information desired by our correspondent.

As our people are not much influenced by European examples, we are inclined to believe that direct appeals to their good-sense and patriotism is the best way to promote "Agricultural reform and elevation;" and such appeals are often more effective, as suggested by Dr. G., when made in a political journal of a large circulation, than when presented to the public in a paper exclusively agricultural, or strictly professional in its character and objects. There are thousands of statesmen and politicians in this country who never read an agricultural periodical, while they study political newspapers with more or less interest and care. Hence, there is wisdom in the idea of enlightening the public opinion, through political papers, on rural subjects, and the duty of Legislatures to foster the great Planting Interest. It is absurd to pretend that useful knowledge of any kind will grow better without cultivation than with it. A valuable crop of popular wisdom

is like one of cotton. In both, the ground needs thorough tillage, good seed, well planted, careful after-culture and protection, till the fruit is ripe and gathered. Where, in the United States, have common schools, academies and colleges founded themselves? On what principle, save that of general utility, have Legislatures used public funds to establish and maintain those institutions? Is it possible that a free and enlightened State will blindly limit its aid to the mere rudiments of mental development, believing that the best talent and intellect of a community are unworthy of scientific culture? If human reason is worth any thing when applied to the greatest pursuit of all civilized nations, why not systematically improve human reason in its immediate connection with said pursuit?

Our best reason requires additional enlightenment; and why not have the expulsion of mental darkness effected, in part at least, by schools, on experimental farms, where the whole truth and nothing but the truth shall be revealed to the understanding of every pupil? At such institutions, all injurious errors will be detected and exposed; while the true principles of agriculture will take a deep and firm root in American soil, and grow *pari passu* with the increase of population. Agricultural science cannot prosper in any country unless it be wisely cultivated. No intelligent man denies the truth of this statement; nor should it be necessary to construct any "political platform," as contemplated by our able correspondent, to attain the beneficent objects sought by the friends of agricultural education and reform. Measures so unselfish, benevolent and humanizing in their nature, ought to be carried without being soiled with unclean party strife, or political dirt. Thirty years' labor, however, has failed to found even one agricultural school on this continent. Let us now consider what new effort, if any, shall be made to unite science and practice in all farming operations. L.

SOWING PEAS AS A PREPARATION FOR WHEAT.

A SUBSCRIBER wrote to us a few days ago as to the propriety of sowing peas upon the stubble of this year's wheat crop with a view to seeding wheat upon the same land this fall on the pea fallow.

As a public answer will be of service, we will state here what we saw a few days ago.

The fine farm of Pichonochee, on the Chickahominy, five miles from Richmond, must have been observed for several years by every one who has passed through it on the Central Railroad. And not the least noteworthy feature is the field which lies broad side of the Railroad, between it and the swamp, with a crop of wheat, now the third in succession, that, but for the drouth, would have made some 25 bushels to the acre. We paid a visit to the worthy proprietor, Mr. Matthews, to get the history of that field, and now give it from notes made on the spot:

Mr. Matthews purchased the land in the year 1849, and seeded this particular field in wheat in the fall of that year. Its crop was not measured separately, but it did not exceed seven bushels per acre as a maximum. In the month of July, before the shocks of wheat were hauled out of the field, peas were sown on this field, at the rate of one bushel per acre, broadcast on the stubble, plowed in with a one horse plow followed by a harrow, (or drag, or rake, as we are sorry to see it improperly called in some places.) The peas were plowed under from the 20th of September out, and wheat sown upon the land. The product was twelve and a half bushels of good wheat per acre.

In 1852, the land was planted in corn and made six barrels per acre, and was again sown in wheat. In 1853, the wheat yielded 16 bushels per acre, and was followed by peas and wheat as before. In 1854, the crop of wheat was twenty-three bushels per acre, and was again follow-

ed by peas and wheat. In 1855, the wheat is cut short by the drouth, but from what we saw we think it safe to estimate that in a fair season it would have made twenty-five bushels per acre.

The land Mr. Matthews called stiff, but we who have stiff land thought it a light soil—clay, with a fair admixture of sand. It had been previously owned by the Messrs. Haxall, and had never been limed by them. Nor has Mr. Matthews applied to it any other manure than what the peas themselves have furnished.

But, whether with or without lime, it is remarkable that six successive crops should have been removed from the land not only without any diminution of fertility, but with a rapidly progressive improvement.

Whether this mode of cropping can be judiciously applied to all lands, we cannot say. We know from our own experiments, at Shadwell, and from the report of Mr. Noland's experiments at Rox, that it would not suit the south west mountain lands or the dry creek lands, generally thought the best of that region in Albemarle, and we doubt whether it would be proper in any lands that are already saturated with vegetable matter. Nor can we venture an opinion as to the time at which this rotation will cease to improve the land or the crop. But we are inclined to the belief that it will only produce more speedily that exhaustion in the product of wheat which we have been laughed at for maintaining as a consequence of the repeated succession of the clover crop.

We prefer now not to encumber the statement of what appears to us as a very remarkable fact with any theory as to the operation of peas as a fertilizer, or the duration of the fertility they produce.

There are not facts enough known, or if known, they are perhaps not yet so systematized as to authorize anything of the kind. But if a few of our friends choose, they can, in few years, by proper experiments, throw a great deal of light on this subject; and it is very evident that such experiments can be conducted for six or eight years without the loss of a cent, either in time or trouble.

In looking at the statement of Mr. Matthews' course of cropping, it will strike the reader as singular that whereas after the first crop of peas, twelve and a half bushels only of wheat was made, after the corn crop which followed that wheat, sixteen bushels was made.—*Southern Planter.*

GALLS AND GULLIES—WASHING OF HILL SIDES—DEEP PLOWING AND HORIZONTAL DITCHING.

We find the following very sensible article in the *Madison Family Visitor*:

There are three things which exert a very controlling influence upon the Agriculture of Middle Georgia: its hilliness, the predominance of clay in its soil, and the want of uniformity in its climate, as exhibited in the terrible rains of spring and autumn, and the long, hot drouths of summer. From a defective system of cultivation, not adapted to counteract the evils consequent upon these, that portion of the State has been changed from a very fruitful to a barren district, scarcely repaying the husbandman for his labor. Can the process of deterioration be arrested now, and can our lands be renovated in a manner which shall be practicable on a large scale? It is proposed to answer these questions by an examination of the three things mentioned at the outset.

First. The *hilly* nature of the country. This obviously affords great facilities for the washing away of the soil, and unless this be prevented by some means, it will without doubt, in a longer or shorter time, render the lands unproductive without the aid of any other impoverishing cause. It is of the very first importance, therefore, that some steps should be taken to arrest this cause of deterior-

ation, for unless it is successfully done, every step towards improvement becomes more or less useless. Except on *very steep* hill sides, it can be done with great success by the following means:

1st. By such a system of cropping and resting the land as shall always keep an abundance of the roots and other parts of plants distributed through the soil; the small grain crops, from the great quantity of their fibrous roots, would produce this result in a most excellent manner, and should enter largely into every judicious system of rotation of crops. This is the plan adopted by nature in the woods, and it succeeds remarkably well there, for it is rare to see even the steepest hill sides in our forests furrowed by water. All are familiar also with the difference in the washing of two fields in the spring, which have been plowed alike in the winter, but one cropped the preceding year with cotton, the other with wheat. What also exempts fresh lands from washing but the numberless roots they contain?

2d. By deep plowing. During a slight shower of rain, water may run along a road, when not the slightest trace of its running can be seen in a field along side of it. Why is this? Simply because, in the former the ground is packed so hard and tight that the water cannot penetrate readily between its particles, and hence accumulates on its surface; whereas, in the latter the particles of the soil having been separated from each other by the plow, the water sinks readily between them as fast as it falls. If the soil be loosened to a depth of two or three inches only, however, during a hard rain it will soon penetrate to that depth, and meeting with a hard surface underneath similar to that of the road, will accumulate upon it, and, if upon a slope may in time run down it and carry the soil away. (And to show that this is fully within bounds of probability, it may be stated that it is not a very uncommon thing for two and even three inches of water to fall during one rain in this region of country.) Now obviously the greater the depth by which the soil is broken up, the larger the quantity of water which can be absorbed without a disposition to run down the hard surface underneath, and the less the quantity which unsoaked up will accumulate on the surface to run freely down its slopes. Every farmer is familiar with the fact that the clayey spots in his fields (which are more difficult to plow, and in consequence less perfectly broken up,) always wash the most readily. Is this due to the fact that clay is more readily acted upon by water than other kinds of soil? By no means; in itself it is perhaps the most tenacious and resisting of all—the washing is undoubtedly due to the circumstances mentioned, to wit: the shallow plowing.

3d. By judicious hill side ditching. And here, as an offset to one of the most common objections to this plan—"the ground it takes up,"—let me mention a fact which may afford a little consolation under the circumstances. The hilly nature of the country, which causes the trouble we are considering, increases the *absolute* extent of its surface, the area of the sides and top of a hill being greater than that of a level plain which could occupy the same situation, supposing the hill removed. For the same reason, obviously, that a road passing over the top of a mountain would measure longer than one tunneled through its base. Supposing a hill one hundred yards long in every direction through its base, and twenty yards high in its middle, the excess of its surface over that of a plain would amount to one-eighth of an acre. It would seem, therefore, that we might allow a little space for ditches. Now as to their bearing on the point in question. When more water falls during a rain than can soak into the ground, it must run somewhere—hill side ditches can't prevent that; their object, however, is simply to modify the direction in which it shall run, and concomitant with this, the fall it shall have. The washing power of water

down the slope of a hill, depends upon two things: the steepness and the length of it—the steeper it is, the greater the velocity it acquires; and the longer it is, the greater the quantity that accumulates during its descent, and its momentum or power of communicating motion to other bodies (its washing power, therefore,) varies as the product of these two things—the *velocity* and the *quantity* or mass. The steepness of our hill sides we cannot change except by terracing, (which is impracticable on a large scale,) but we can cut a long slope into a succession of *short* ones, by ditching at proper intervals, which shall catch the water in its downward course, before it has had time to acquire great bulk or velocity, and turn it into channels where we can regulate its velocity. Moreover, by running the rows between two ditches with only a slight fall into the lower one, we can, in *most* cases, cause all the water, which runs down our hills to follow such circuitous paths and such gentle slopes, as to produce almost no appreciable washing.

At some future, time we propose to discuss the other two subjects mentioned.

AGRICULTURAL WRITING AND READING.

THERE are some fifty agricultural papers in the United States, besides a large number of newspapers which either have agricultural editors, like the *Louisville Journal* and *N. Y. Tribune*, or copy freely from the rural periodicals of the day. The rapid growth of this kind of literature is one of the most auspicious signs of the times; for it indicates both an increase and an elevation of knowledge in the masses who own and cultivate the soil. That our agricultural writing is not all of the best quality, nor our agricultural reading entirely reliable, is plain enough to every well informed observer. Indeed, our defects are often so glaring with absurdity, and so injurious to the public, that one who really feels a deep interest in the character and permanent good of the rural literature of the country can hardly abstain from exposing and condemning some of the more mischievous errors with which the agricultural press everywhere teems. So far as the writer may attempt anything of the kind, it will be with no unkindly feeling; much less in a dogmatical spirit, but solely to prevent a departure from the true principles of the most important profession to be found in civilized nations.

The following remarks are taken from the June number of the *New England Farmer*, where they are commented upon approvingly by one of the clearest and best informed minds connected with the agricultural literature of the Northern States. The paragraphs are there ascribed to Prof. MAPES, of the *Working Farmer*:

"The chemist tells us by analysis, that blood is composed of certain materials and water. All these materials exist in rocks, and may be separated from them.

Now let us suppose ten square yards of soil to be fertilized by 10 lbs. of bullock's blood, and another ten square yards of soil to be fertilized by the constituents which analysis shows to exist in 10 lbs. of blood, and that these constituents shall not only undergo the greatest degree of mechanical division by grinding, but they shall absolutely be placed in solution and applied to the soil, still, notwithstanding this great mechanical sub-division, the ten yards fertilized by the blood will yield double the amount of crop of that fertilized by the same constituents from the rocks.

"As another instance. Should we fertilize one piece of land with the bones of an animal, previously heated to redness, so as to drive off the gelatine, fatty matter, etc., and leave phosphate of lime only, dissolving it before its application in sulphuric acid, and should fertilize another piece of land with the same amount of phosphate taken from the rocks as at the location at Dover, N.

J., or Crown Point, Lake Champlain, and dissolve this also in sulphuric acid, we should find that the portion fertilized by the dissolved bones would yield a crop much larger than that arising from the use of dissolved phosphate from the rock.

"This gives rise to the question, Does matter, by its entering into animal and vegetable organisms, undergo any changes which are important for after-progression, but which changes are not discoverable by chemical test or microscopic investigation? All experiments seem to prove that isomeric compounds, although chemically alike so far as analysis is capable of discovering conditions, really do differ in their adaptability for appropriation in organic life, and thus the ingredients found in the blood or bone of an animal, between the time of its leaving the original rock and becoming blood or bone, may have occupied place in vegetable or animal life a thousand times, *at each of which assimilation, growth, and decay, it may have been more fully suited for its present advanced purposes*, and thus the phosphate of lime and other constituents of blood may differ in their applicability for re-appropriation, from the same materials in a less advanced state. We all know that when a plant or animal decays, or is consumed in any way, that its ultimates pass back either to the soil or the atmosphere, and are re-united in some new organic form; no one particle is ever put out of existence—and may not this be the cause why many manures are to be found so much more effective than others of similar composition?

"All know that the ultimates contained in a green crop, when applied to the soil from original sources, will produce no such result as is consequent upon the plowing under of a green crop.

"We all know that nightsoil, urine of animals, stable manure, etc., produce effects in vegetable growth not to be arrived at by the use of the same constituents direct from the rocks."

"The above reads smoothly and prettily; but whoever shall adopt the theory therein propounded, and act upon it in the preparation of manures, and the renovation of impoverished fields, will soon lose hundreds, if not thousands of dollars. It is based on *no facts whatever*. It rests solely on idle assertion; and this assertion on a vivid imagination, perhaps, quickened by pecuniary interest.

Where is the evidence that "Should we fertilize one piece of land with the bones of animals, previously heated to redness, so as to drive off the gelatine, fatty matter, &c., and leave phosphate of lime only, dissolving it before its application in sulphuric acid, and should fertilize another similar piece of land with the same amount of phosphate of lime taken from the rock, as at the location at Dover, N. J., or Crown Point, Lake Champlain, and dissolve this also in sulphuric acid, we should find that the portion fertilized by dissolved bones would yield a crop *much larger than that arising from the use of dissolved phosphate from the rock*?"

The above theory may be advantageous to one engaged in the manufacture of superphosphate of lime from calcined bones, or bones not calcined in competition with others who make their superphosphate from the cheaper phosphate found at Dover and Crown Point. But is that fact a good and sufficient reason for its general promulgation by the agricultural press as a principle in agriculture?

It will be difficult to find a well-informed geologist who doubts the existence of vertebrated animals, and others which had sensible quantities of phosphate of lime in their organized tissues, on this planet, millions of years ago; and that from their first creation to the present moment, they have never ceased to subsist on organized food containing atoms of phosphoric acid and lime. The same is true of atoms of water, (oxygen and hydrogen) atoms of carbon, (coal) and atoms of nitrogen, sulphur, chlorine,

potash and other elementary constituents of plants and animals. How ridiculous, then, to assume without the least proof or probability that an atom of lime, or water is *constitutionally* changed every time it, perchance, exists in the living cell of a plant, or animal for a few days, weeks, or years? Who doubts that the Author of nature keeps the atoms of pure water, and all the elements of things terrestrial, in the same unchanged purity?

What we earnestly desire is to keep agricultural philosophers, and would-be philosophers, as closely as may be to the inductive system of reasoning. Let the critical reader who knows something of the difference between solids and fluids, between combustible blood and incombustible rocks, weigh well the following propositions:—"Let us suppose ten square yards of soil to be fertilized by 10 lbs. of bullocks blood, and another ten square yards of soil to be fertilized with the constituents which analysis shows to exist in 10 lbs. of blood, and that these constituents shall not only undergo the greatest degree of mechanical division by grinding, but they shall absolutely be placed in solution, and applied to the soil, still, notwithstanding this great mechanical subdivision, the ten yards fertilized with blood will yield double the amount of crop of that fertilized by the same constituents taken from the rocks."

Did not this humbug, like that of SIGNOR LATTIS, appear to make converts of really intelligent men, we should not notice it. But when this false doctrine is travelling over the country, as scientific gospel, may we not pertinently inquire, how Prof. MAPES will extract organized nitrogen (the most important fertilizing ingredient in blood) from any common "rock," after he has ground it as much as he pleases? Naked comminuted rocks form a barren earth, (we cannot call it *soil*) mainly because such rocks and earths lack the fertilizing atoms known to exist so largely in the "blood of bullocks." The case put is not, therefore, a supposable one, because the thing supposed is as impossible in fact, as it is unsound in theory. No scientific reader needs to be told that all elementary bodies, like iron, gold, lead, oxygen and carbon are minerals; or that vegetable vitality, under favorable circumstances, is able to combine and organize these minerals, (such as nature has adopted to the purpose) into the food of animals, man included. The agriculturist evinces his wisdom, or want of it, by the skill with which he uses all the minerals and organized elements of his crops and domesticated animals. This is the test of his scientific and professional attainments. That knowledge which is based on mere assertions in books or periodicals, may look well on *paper*; but you may believe one who has tried it, it will not *work* well in practice on the farm. We yield to no one in our profound regard for the due consideration of the conditions of elementary matter, whether solid, gaseous, or liquid, soluble or insoluble, organized or disorganized; for all these ever-varying conditions are elements of power and wealth in the hands of those who know how to turn them to a profitable account. The close and careful study of *things* agricultural, is precisely what we contend for. It is equally unphilosophical and injurious to agricultural progress to make assertions like the following: "*We all know that night-soil, urine of animals, stable manure, etc., produce effects in vegetable growth not to be arrived at by the use of the same constituents direct from rocks.*"

Instead of suggesting the possibility of extracting night-soil, urine and stable manure "direct from rocks," how much better it would be to indicate the power of certain leguminous and other plants to imbibe the elements of these valuable fertilizers directly from the atmosphere and the subsoil for the use of the cultivator? In this way he may easily increase the aggregate quantity of organized food for man and beast on his farm, and also the materials for making an increased amount of rich manure. But

plain, common-sense facts of this kind leave not room enough for the full exercise of the imagination. It craves the light and shade of more pleasing abstractions—the impossible changes, from year to year, of the "ultimates of matter." It is; however, the part of wisdom to learn what is *knowable* and be content therewith, rather than neglect that, and dive out of sight into the abyss of the "unconditioned." L.

HORSES AND MULES FOR THE SOUTH.

THE neglect of grain crops by the cotton planters of the South, has been often and justly animadverted upon. The maxim—"produce, if possible, all of your home supplies *at home*"—cannot be too often or too deeply impressed upon the agricultural community of the Mississippi Valley South.

But there is one corollary from this maxim, which so far we believe, has been but little agitated or discussed. With every natural facility for growing *fine horses and mules*, all the cotton States (excepting a small portion of Tennessee) are tributary to Kentucky and the Western States for their supplies of those useful and indispensable auxiliaries of man, whether engaged in agriculture or commerce.

There is no reason why Tennessee, Arkansas, Mississippi, Alabama, Georgia, and Texas, should not raise all of their own horses and mules. There is no earthly reason why these States should not also raise all of their own corn, hogs, cows, &c. There is, likewise, no earthly reason why these States should not pay particular attention to the improvement of the breeds of all the different kinds of stock.

It is sometimes said that the South is not a good grazing country, and, therefore, not suitable for growing fine stock. A moment's consideration will show that this is the purest "fudge." The lowlands bordering upon every perennial stream in the South—from the lordly Tennessee to the smallest brook "singing its quiet tune," are capable of being made, at little expense, the finest pastures in the world.

Look at the Tennessee river bottom; how many millions of acres are *there*, yet awaiting the occupancy of the grazier, to whose purposes they are better suited than to those of any other class of agriculturists! So of Obion, Forked Deer, Hatchie, Wolf, Tallahatchie, the upper Tombigbee, and all the streams, large and small, of the South, including the mighty Mississippi, large portions of whose immense bottom are admirably adapted to all the requirements of the stock-grower.

When will the South be true to herself? When will Southern men learn their true policy? When will they learn that everything produced at home—corn and horses, peas and hogs, potatoes and mules, shucks and sheep, brogans and beef—is a saving of always double, and often quadruple, of what the same article would cost, if they have it to buy?—*Memphis Eagle & Enquirer*.

WHEAT GROWING IN LOUISIANA.

EDITORS SOUTHERN CULTIVATOR—The extensive circulation of your valuable journal throughout the South, induces me to apply to you for information upon a subject to which the intelligent farmers and planters of this Parish are now looking with much interest—the growth of wheat. The high price of flour and the difficulty we have experienced in obtaining it at any price for the last twelve months, have satisfied every body that we must put our own shoulders to the wheel if we desire to avoid a continuance of the present state of things. Little or no attention has ever been paid to the growth of wheat in this part of the State. I do not know a single plantation or farm on which an acre of wheat is sown, and my acquaintance is general in this Parish. Yet, more than half a century since, the Spanish government planned and

partly carried out a scheme for supplying her military posts, throughout the State—the settlements in the lower part of the State—and the Havana, with flour, to be raised in this section of Louisiana.

We believe that the soil of our uplands is well adapted to the growth of wheat, and we desire to give it a fair trial. Will you give us the results of your experience and observation as to the kind of wheat best adapted to the climate of North Louisiana; the time of sowing, &c.?

Believing that wheat grown in Georgia, Alabama or Mississippi would do better than any brought from the North or West, I would like to know where we could apply for a good article of seed wheat for use this fall?

By attention to the above requests you will oblige your subscribers in this Parish, and particularly your subscriber and correspondent,
WM. H. HENDERSON.

Bastrop, La., May, 1855.

REMARKS.—We will endeavor to reply in full to the inquiries of Mr. HENDERSON in our August or September number. In the meantime, let us hear from our friends in Louisiana, who have been successful in raising Wheat.
—EDS.

THEY STILL CONTINUE IN THE OLD WAY.

I ALMOST despair of saying anything that will be heeded by planters—so much already from more scientific men which has passed off like water “spilled on the ground.” I mean in South Carolina. It is still cotton! cotton!! to the neglect of other matters. I have yet only one hope left, viz: The posture of things at present being calculated to bring my brother farmers to reflect a little on the highly deleterious course hitherto pursued.

I ask, shall we consider a moment, or shall we continue till we are irretrievably gone? Talk to them of the course hitherto pursued, and they will admit the soundness of the logic, but still continue the old plan. One of the poets, perhaps Hudibras, more beautifully expresses the idea thus:

“I know the right and I approve it too,
I know the wrong and yet the wrong pursue.”

Perhaps some of my brethren may ask what is all this fault-finding about? I have done the best I could. I raise as good crops of cotton as do my neighbors. I, like them, plant my best land in cotton, and raise some four or eight bales to the hand, &c. True, I have to buy my pork, flour, and perhaps some corn, but my neighbors do the same—we all do it. Now, my brother, let me ask you if it would not be better in the end to plant less cotton, raise your own pork, and make grain in abundance? Again, I ask, what is the condition of your lands? Are they growing richer, or poorer? or how stands the account? How much forest land have you left? You have made remunerating crops of cotton—perhaps large ones; increased the number of your negroes; cut down nearly all your wood lands; but I ask you candidly, is your estate really increased? Would not your lands, if now in forest, be equal to your purchase of negroes? It may be you have kept up your lands by manuring, and your forests standing; if so, go on with your manuring. But I beg you to plant less cotton and more grain; raise your own horses, mules and pork; keep your land in good heart; plant less, work better, and if you give it a fair trial, my word for it, you will find things go better, and in the end you will say all is right. You will be able to count more clear gain than by the old plan of cotton! cotton!! Look at the condition of things now. Just contrast the condition of the two—the *reformed* and the *common* mode of doing business. Pork \$6 to \$7 per hundred; corn \$1 per bushel; flour \$10 per barrel—and cotton four to seven cents. But some brother will say there is something pec-

uliar in this. Wars and short crops have something to do in bringing about this state of things! I frankly admit it. I have no doubt of it, but I believe it is admitted by all, that “like causes produce like effects” at all times and under all circumstances. Now, I ask, may not this concurrence of things again happen? The population of the earth is increasing and the lands are deteriorating, and one cannot always calculate on that abundant yield as in times past. I am not distrustful of our Creator, for he has promised “seed to the sower and bread to the eater.”

My main object is to impress on the minds of my brethren what I think is sound, wholesome doctrine. God prosper you in your laudable undertaking. I wish your valuable journal may reach the fireside of every Southern family.
Yours, with due respect,
W.

Winsboro', S. C., Jan., 1855.

My very dear “W.” despair not! there are yet “7,000” good and faithful planters that see right, know right, and have determined to work right—yea, and many of these in our good old native Carolina. They are not a host encamped altogether, but like leaven, they are located in every district throughout the planting region. Shall I point you to “Broomsedge,” “Panola,” “Summer,” “Maj. Seaborns,” &c., with many other worthies of your own State? We say, then, despair not, rather gird up your loins, buckle on your helmet. This great work of agricultural improvement that is to make our whole country bloom as the rose of the valley, is to progress to a glorious consummation. Even Carolina’s revolutionary hills, from the mountain steep to the sand beach, laved by old ocean’s waves, shall groan as it were, under the densely clustered fruits of an improved and scientific agriculture. Who, you may ask, is to accomplish this glorious work? I answer you, first, that there is but little aid to be expected from those who “simply admit the soundness of our logic.” These very clever, good natured, industrious cotton growers and *land killers*, will, perhaps, turn to your next neighbor, and with a smile of contempt, ridicule your horizontal rows, your manure banks, your improved plows and subsoiling. But be not deterred at this; look you to such men as Edmund Ruffin and Daniel Lee, and a thousand others in their wake, that I might name—these men “*admit our logic*” in its *practice*. Such are the men to accomplish the good work. We must feel the responsibility ourselves, those of us who know so well the importance and value of the great reform in our agricultural economy. Action, action, constant action. The agricultural press is our sheet-anchor, our Archimedean lever. We must sustain it, not only pecuniarily, and by placing it in the family of every planter in the country, but with good, sound, practical communications, the details of practical experience in the proper preparation and cultivation of land; in the economy of stock raising and feeding, and, in short, in all the practices of an improved plantation economy. We must be up and doing, and we must persevere. Too many of our good friends think that one article a year for an agricultural journal is a great deal—that may be very well—it is doing well, but stop not at that; do we not know that the victory is not to be won, the reward to be gained alone “by a patient *continuance* in well doing.” We must persevere. We must strive to unite and concentrate our efforts. Whatever defects there may be in our system of Agricultural Societies, they are certainly the best means yet devised for rural districts, thinly populated, as is the case in the planting States, for stimulating and causing planters to interest themselves in agricultural improvements. It is true, that clubs in villages or cities, where planters might meet weekly or monthly, and discuss socially, the various practices and improvements in their plantation operations, would be a means of most valuable improvement. But our planters are not citizens of villages or towns and we must, therefore, en-

courage County and State Societies, with industrial exhibitions and fairs. When shall we enjoy the pleasure of being present at a State Fair, in the lovely city of Oaks and beautiful Gardens—Columbia?—*American Cotton Planter*.

GEOLOGY.—DR. KERSH.

We append the article alluded to by Dr. KERSH, on page 153 of our May number, copying from the *Fairfield* (S. C.) *Herald*:

Daniel Lee, M. D.—Dear Sir.—I would like to be understood exactly on one of the points incidentally alluded to, and upon which I entertain an opinion different from any I have seen expressed. The *modus operandi* of calcareous manures. Mineral substances are not directly nutritive; the same species of plant growing on different soils contain often, very disproportionate amounts of mineral substances in their ashes. The virtue of lime does not depend upon its being applied in the condition of an alkaline oxide or quick-lime: nor upon its power of *decomposing*; but of *generating* vegetable matter. I do not refer to the visible supraterrrestrial crop of herbage; but always as in the case where soils are too sterile to produce herbage, it is dependent upon their producing primarily an abundant spontaneous growth of very minute Cryptogamic vegetation through the soil. It is not practically important to say whether they encourage this growth by retaining the nitrogen of ammonia from rain-water or otherwise; but it is extremely important to know that soils *originally* and *radically* sterile, can only be brought to a condition of durable fertility by the agency of mineral substances; and equally important to understand, in climates where Cryptogamic vegetation is not exuberant, other conditions of *rest* especially during summer months, with winter or spring crops, pasturage or some other system of agriculture that implies the least possible disturbance of soil are equally indispensable in promoting the growth of the Cryptogamites. The presence of superabundant moisture alters the character of chemical as well as vital actions; and depleting a soil of so much moisture, as is obnoxious to a crop while on the land, is not, in general, enough to secure the most efficient action of minerals. I propose to bring the Microscope to bear on this subject. One other point; I stated the theory suggested was "generally" true of the fossiliferous as well as the Hypogene formations. The age of the world known as the Drift, Till, or Erratic formations, suggested by you to form an exception, belongs in part to the Post Pliocene, and in part to the newer Pliocene period. The Drift of the most southern latitudes being usually of the highest antiquity. The Drift is not, however, developed in any part of the Western continent lower than the 38° or 40° of latitude. The question of Fauna and Flora can only affect the theory in one way, and I will state it fairly. During the periods that the body of land from about the central parts of the State of South Carolina, Georgia, Alabama and Mississippi, were being deposited at the bottoms of the Eocene, Miocene and Pliocene oceans, the *species* of animals and vegetables underwent five entire revolutions; the old species becoming extinct, and new species being created successively. *The Earth was as well peopled during each of these successive epochs, both in the variety of animals and vegetables of classes and species the most highly gifted and organised; (man, Troglodytes, and Pithecus excepted,) and in the numbers of individuals representing species at each of these successive periods, as it is at this present time.* The exuvia of these animals are left for us to this day; and finding considerable quantities of teeth, of extinct Squalidae, or similar fossils through the soils at one point, we infer the existence of small amounts of phosphate, as well as carbonate of lime in those soils. Chemis-

try has demonstrated the truth of the inference. There was a misapprehension that I had maintained the soils of the stratified fossiliferous series to be derived in *all cases*, or even in general, from subjacent Rocks: not entirely so; but that one, conversant with the characters of the soils and subsoils of the Hornblende rocks, (Syenite, Trap, Hornblende, Slate,) or with the Micaceous soils, (some Granites, Gneiss, Mica Slate,) the Talcose soils; (Protogine, Talcose Slate,) &c.; cannot fail to perceive a most striking similarity in the soils and subsoils of any and all of the fossiliferous formations where they approximate, in chemical or mineralogical constitution to the more Primitive or Hypogene soils. The various sand hill soils, resembling the *loose silicious* Granites; Calcareous soils generally, primitive Limestones; the Soap-stone soils resembling Protogine; the so-called isinglass land, containing the regular proportions of Potash, Alumina, and oxide of iron met with in metamorphic gneiss, or mica slate land. The proposition of Albite superseding common felspar in any soil, a very frequent occurrence and easily recognised, changing the chemistry of such soil from potash to soda is again submitted. The nice distinctions in Flora and Fauna by which we know the modern, *very modern*, but different periods that the places where Rome and Naples now stand were converted into land: by which we know the infinitely more remote but still *comparatively recent* time the Alps first reared their heads above the waters of the Eocene ocean, or the different ages of the Grampian Hills, Rocky or Allegheny Mountains; or by which we know when the great classes of Placoid and Ganoid fish ceased to flourish, and the Aenoids and Cycloids were created; of the rise, flourish, and fall of the families of Trilobites, Belemnites, Ammonites, or Graptolites; of the Chephalaspides or Pterodactyles, does not affect, in a great degree, the general question.

Respectfully,
W. D. KERSH,
Member of American Association of Geologists and Naturalists.

P. S. Other papers publishing my first letter will oblige me by copying this.
W. D. K.

THE BUCK EYE REMEDY FOR PILES.

EDITORS SOUTHERN CULTIVATOR—I notice in the April number of your journal a cure for Piles, said by your correspondent "Q" to be an infallible remedy. I do not hereby intend to question his veracity; but can say that he is most certainly mistaken. I, too, have been, like him, a sufferer with the disease; and, like him, carried a buck eye in my pocket for more than two years, and was not at all benefitted thereby; and have known others to do the same thing with the like results. I have, also, known others who got well of the disease while trying the same plan, and, like "Q," were fully convinced of its efficacy. I have, also, known some to get suddenly well without the buck eye, and using no other remedy, and think that this would have been the case with "Q," and others, if they had never seen a buck eye, and can only set down their cases as coincidences.

As I have never seen the following remedies for bots and fistula in horses, in print, I send them, hoping that others may have the like success with them that I have had. For bots, I give one pint of molasses, diluted with milk, sufficiently thin for a drench; in a half or three-quarters of an hour after, one ounce of calomel, and in two hours after, 2 pounds salts or 1½ pints of castor oil. I believe this, if the animal is within the reach of medicine, to cure—will do it. For Fistula, make about a gallon of corn meal mush very soft, and as salt as it can be made; put it into a thin cotton bag and apply it perfectly hot to the tumor. This done every alternate day for three days, I have never known to fail of effecting a cure. The best

method to keep the application to the place, is to make a band; keep it on by folding a blanket sufficiently to keep from burning the hand, and with this hold the bag containing the mush; keep it on some 20 to 30 minutes at the time.

A piece of blue vitriol about the size of a partridge egg dissolved in $1\frac{1}{2}$ pints of water, will cure founder, if given within 48 hours after the animal is foundered. W.

New Prospect, Miss., May, 1855.

DEVONS FOR THE SOUTH—WINTER PASTURE— RANDALL'S COTTON PLANTER, &C.

EDITORS SOUTHERN CULTIVATOR—A serious drouth has threatened the entire failure of crops of every description in this section of country, having had no rain from the 13th of March up to the 18th of May, (except a slight shower on the 14th of April); since which time we have had four or five fine rains—it has rained the greater part of the last 48 hours—but the wheat crop proves to be very fine; Oats, almost a total failure; Corn and Cotton now look very promising, though the latter has only come up within the last ten days.

As long as I have troubled you at all, will you please answer the following inquiries:

Will the Devon Cattle thrive well in this climate? We have no fine cattle in this region.

What is the best winter pasture for milch cows in our Southern climate?

What is the price of Randall's Cotton Planter, (now in your advertising columns) and will it do what the Patenteen's claim for it? Very respectfully, L. H. H.

De Soto Co., Miss., May, 1855.

REMARKS.—The Devons are better adapted to the climate of the South than any improved race of cattle that have ever been brought here. The best winter grass for pasturing cows is yet a mooted question—we dare not attempt to answer this question. We like Rye, Egyptian Oats, &c., very well. We have no practical knowledge of the value of Randall's Cotton Planter, but believe it to be a good machine. Address the proprietors for terms, &c.

—Eds.

WARTS ON HORSES.

EDITORS SOUTHERN CULTIVATOR—Seeing a number of the *Southern Cultivator* for December, 1853, when brother J. A. G., was the subscriber—we living together—I noticed on page 359 a plan for curing warts on horses, viz:—To use the actual cautery, in the form of a hot iron. Permit me, if you please, to suggest an improvement, as I think, which is to stick a pin into the wart and hold a lighted candle so as to have the head of the pin in the flame. As soon as the horse becomes unruly from the pain, let him off from the treatment until quieted, then go through the same process again, and again, and in a few weeks you will find the wart cured.

The same treatment will cure the wart on persons. And should some prefer the poke root poultice to the cautery by simply poulticing a wart for a few days, say three or four, with the pulverized roots of the poke, this will cure them without any annoyance, save an intolerable itching. Respectfully, J. L. G.

Cummins, Ark., May, 1855.

BEAUTIFUL PASSAGE.—The following is from the pen of Walter Savage Landor:—"The damps of autumn sink into the leaves and prepare them for the necessity of the fall; and thus insensibly are we, as years close around us, detached from our tenacity to life by the gentle pressure of recorded sorrows."

HOLLOW HORN, AGAIN.

EDITORS SOUTHERN CULTIVATOR—I see in your May and June numbers answers to my inquiry for information on hollow horn, and as my object was to draw a discussion on the subject for my own benefit and the benefit of others, I will attempt a reply; and if it is taken in the same spirit in which I write it, I am sure it will do no harm, if no good.

As I presumed, W. R. J. says it is the hollow belly, and nothing else. Well, if he thinks so, of course he has a right to think as he pleases; but, as for myself, I cannot think as I please, every time. I am compelled to think what the force of evidence brings to my mind, and I have seen enough to compel me to believe that a fat cow or ox will take the hollow horn. That they will remain fat after they take it, or with the disease on them, we all know they will not. He says: "some two years ago one of my neighbors had a very fine fat cow down on the lift, and he bored her horns and poured salt and water in them." Now, if the horn was not hollow I should like to know how he poured salt and water in them. Let him bore into a horn that is not diseased and see if he can pour water in to it.

I pronounce that one case, at least, of a fat cow having the hollow horn, from his own testimony, and I give one now, almost a parallel case, from my own experience. But I shall get my yarn too long, so I will drop brother W. R. J., for fear he may think I am quarrelling with him, which is not the case—all for information. That the disease may affect the head and other parts of the system I will readily admit.

Brother "HOMESPUN" talks more reasonable on the subject, but seems to think poverty has a great agency in the disease; but as my object is not to quarrel, but to draw out information, we will let that drop. He says that exposure to cold is one cause; that is the general opinion, and I do not pretend to say yea nor nay. But I will give my mode, or practice, of treatment to my oxen. I have a large open shelter in my lot to feed my oxen under, with trough and rack, and I invariably give my oxen their peck of meal per day and fodder, shucks or pea vine hay sufficient to their fill, and they are nearly always in fine order until they become diseased, and I never have had a cow to have the disease, and I know cows in the neighborhood that were never under shelter nor ever fed through the winter; and it appears that the cold would have as great an effect on their horns as it would on one that was well fed and in good order.

A SUBSCRIBER.

P. S.—I shall try brother "HOMESPUN's" remedies and give the public the result; for I have four subjects to experiment on—out of five work steers, four of them are now laboring under the disease.

Haneville, Ga., June, 1855.

HOLLOW HORN—A CURE!

EDITORS SOUTHERN CULTIVATOR—I see in the April number of the *Cultivator* an "Inquiry" by "A SUBSCRIBER" asking what will cure Hollow Horn in Oxen, and as I have not seen any reply to his inquiry, I have concluded to furnish him and all others interested the following simple but certain cure for that ailment, in oxen and cattle generally, viz:—Bore the horns into the hollow at about five or six inches distant from the head with a common size gimlet, and with a suitable syringe inject a solution of strong salt water, until the hollow is completely filled. Repeat this once only and a permanent cure is effected. The hole should be made on the upper back part of the horn, so that the water could not escape. This is, indeed, a simple cure and doubtless is known to many farmers, but it is, positively, a certain cure for the Hollow Horn in Cattle, and if the inquiring "SUBSCRIBER" is not acquainted with it, he ought to be; hence I send it to you for pub-

lication, if you deem it worth a place in your valuable journal.

I would further remark that cattle, especially oxen, are frequently effected with what our farmers here call "Hollow Tail," or "Worm in the Tail," which causes them to linger very much as though they had "Hollow Horn," and most frequently these diseases accompany each other. The one is known by the horns becoming very cold and assuming a dead color. The other is known by the decaying of the tail bone near the bush of the tail, and can be permanently cured by splitting the part lengthwise, and filling the vacant place with common salt and binding up with a strip of cloth, of sufficient strength.

These two diseases of cattle, Messrs. Editors, are very common (or have been) in our State, and the remedies herein prescribed have never failed to cure them, as I have known; and if they go before the public through me, and should be in any degree beneficial to any one, then I am satisfied; but if you deem them unworthy of notice, then you can place this sheet among your rubbish, and still I will be satisfied.

Very respectfully yours,

JNO. RANDOLPH HARRISON, Post Master.

China Hill, Fla., May, 1855.

HOLLOW HORN.

EDITORS SOUTHERN CULTIVATOR—I see in your April number of the *Cultivator*, an inquiry from a Haynesville subscriber, for the cause and remedy for the Hollow Horn in cattle. I have long thought, without ever having been fully confirmed in the opinion, that the Hollow Horn in cattle is caused from the freezing of the pith of the horn from being exposed, without shelter, to extreme cold weather. I do not know that I can give a remedy; but if this be the cause I can give a preventive, which is worth more; and that is to shelter your cattle in winter. I am of the opinion that, in this Southern climate, if cattle are suffered to lie in the woods during the very cold weather, they will rarely if ever be troubled with the disease. I was once a Georgian myself and well know the practice there, as in many other old States, of penning cattle without shelter, in a small enclosure, and that frequently in the centre of an extensive farm, with no surrounding woods to protect them from the cold, frosts and winds of winter. No wonder that cattle die with the Hollow Horn from such treatment. If I am correct, as to the cause, your Haynesville subscriber will, perhaps, be better able to prescribe a remedy than myself; and if I am not correct, I will join him in the inquiry, hoping some of your numerous readers will give the true cause, remedy and preventive. I have not had a case of Hollow Horn for many years, and I always suffer my cattle, in the absence of a better shelter, to resort to the woods for protection in very cold weather.

If my suggestions are worthy an insertion in your valuable paper, you can publish them.

Very respectfully,

CHAS. CARGILE,
A Subscriber.

Terra Nor, Ark., May, 1855.

A NEW GRASS (MOHA DE HONGRIE)—STUMP PULLING MACHINE, &c.

EDITORS SOUTHERN CULTIVATOR—Enclosed you will find a gold dollar, for which send me *Southern Cultivator*. I am not much of a farmer, though I have been trying for the last 25 or 30 years to do something in that way. I am induced to take your paper to try and improve myself and keep up with the improvements and discoveries of the age, late as it may be with me. If, in my intercourse with you, I should trouble you with inquiries to your annoyance, you can only decline to answer.

I have some to make at present, and will commence

with some grass seed, that I received from the Patent Office, "Moha de Hongrie," *panicum germanicum*. The paper says it is a grass that resists drouth, and grows well on dry soils; to be sown from May till July. I sowed the seed about the last of April; there had been a very light shower a few days before; the ground was fresh broken at the time of sowing. The seed came up in a few days; it rained no more for nearly a month, or, perhaps, more. They came up very well, but the hot sun killed the most of them. They have been planted about 6 weeks, and what is alive is now heading at about a foot high. There has been little rain on them since they were sown; they, however, have not stood the drouth as the paper said they would. My object is to know if you know any thing of the grass, and is it worth cultivating? and, if so, what is the mode of cultivating? or is it sown broadcast for grass-plats?

I am informed that at the North they have a machine for pulling up stumps, with which (with a yoke of oxen and two men) the stumps can be removed from 2 to 3 acres per day. If you know of such a machine, will you please write me where they are to be had and at what cost? If we could remove the stumps from our fresh land at any reasonable cost, it should, by all means, be done; for by the time the stumps rot out, the top soil and vegetable mould has all passed down the branches and creeks, and it is almost impossible to horizontalize land impeded by the stumps.

I write this in great haste. If agreeable I have several other inquiries, about which I shall wish to avail myself of your experience.

Very respectfully, your obedient servant,

J. W. M.

Mansfield, La., May, 1855.

REMARKS.—We have had inquiries respecting this grass (*Moha de Hongrie*) from various sources, but we have no practical knowledge of it. Most plants of the genus *Panicum* are annuals, coarse, and of little value for grass. We have mislaid the address of the patentee of a new stump machine, but will publish it hereafter for the benefit of "J. W. M." and others.—Eds.

ICE HOUSES FOR PLANTERS.

EDITORS SOUTHERN CULTIVATOR—Can you inform me, through your columns, of the best mode of constructing an Ice House on the most simple yet effectual plan for families living in the country, say large enough for half a dozen families? Our summers are so warm, and, in many localities, the water is so bad, which renders ice almost indispensable. Inform me, if you please, the mode of construction; the material used, and whether it is best to build under or on top of the ground.

A SUBSCRIBER.

Jefferson County, June, 1855.

REMARKS.—You will find full directions for the construction of cheap and efficient Ice Houses, in the September number, (1855) of our paper, page 293. If you have not access to this number, and will so write us, we will send you the paper, or republish the article.—Eds.

SACCHARINE STATISTICS.—New York produced in the year 1850, 10,357,484 pounds of maple sugar; Vermont produced 6,349,357 pounds, and Ohio, 4,588,109 pounds. Almost all this large quantity is manufactured by the rudest and most wasteful processes. The value of the yearly crop of maple sugar in New York is nearly one million dollars.

HORIZONTAL TILLAGE AND GUARD-DRAINS, OR HILL-SIDE DITCHES.

THIS is a subject upon which, we had supposed, the Agricultural world of the South was already pretty well informed, and that though Guard-drains were not yet very generally employed for the protection of hill-lands, horizontal tillage was everywhere practised. Our astonishment may then be guessed at, when we found but one plantation in Texas, during a somewhat lengthened excursion in that noble State during the past spring, upon which the rows were not run without a thought as to the lay of the land! Guard-drains had been successfully made upon the same place. Those beautifully undulating Post-oak lands, and magnificent rolling prairies were all alike being ruined, aye utterly ruined. It was really painful to behold. The excuse was, an entire want of knowledge as to how to lay off horizontal rows, and guard-drains. We explained the process there to all who seemed to desire the knowledge; and will now do so, again and still more clearly through these pages. In nearly all of the older Southern States, a vast proportion of the best lands are already worn, washed and gullied to such a degree, as to be nearly ruined for further cropping in cotton or corn; though yet reclaimable by the regular system we are treating of, aided by Guano, Clover and Plaster, Bermuda grass and Sheep. How far this can be profitably done, depends much upon location, cost of labor and Guano, and the price of cotton. The friable nature of the soil of our hill-lands, the heavy rains with which we are so frequently visited, with the continued course of clean tillage crops which we pursue, renders a system of horizontal tillage indispensable. It is found, however, that this alone is not sufficient to prevent the formation of numerous washes and still deeper gullies, which are cut out upon long hill-sides during heavy rains—to the ruin not only of the hills, but of the bottom lands, upon which the poorer subsoil from the gullies is carried in vast quantities covering up the richer soil of the bottoms to a depth inaccessible to the plow and ruinous. Guard-drains are also needed, by which the accumulated waters may be carried off gradually, and discharged at selected points where they will effect the least injury.

Where the subsoil is at all porous and the land has been broken up to a proper depth, the water that falls upon the immediate surface of any hill-side, will rarely cut it into deep gullies, unless the distance it has to run is very considerable. It is its accumulation on the gentle slopes above, that is the cause of the damage. There the horizontal furrows fill up with water, which runs over at some low point, and cutting through each ridge as it goes, gathers strength and weight by the added contents of every furrow; until, by the time it reaches the brow of the steeper hill, there is water enough rushing down to cut a gully that cannot again be stopped, without a great expenditure of labor.

So long as the soil contains a fair proportion of fibrous vegetable matter, it washes but little. When this becomes exhausted by continuous tillage, the soil loses what tenacity it had, and literally melts in the rain; the shallow plowings, which, even in breaking up, so rarely stir the ground to a greater depth than from three to four inches, greatly aiding in the process: so that it is not at all unfrequent to see large spaces from which the entire surface, plowed shallow, has been washed off down to the *hardpan*.

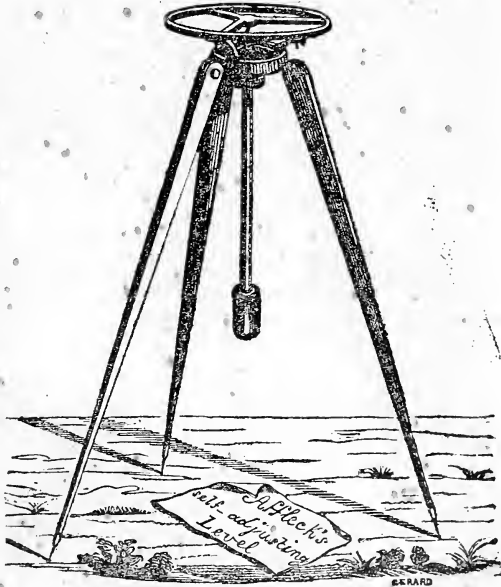
It is a fair inference, that if means are used, before the land becomes exhausted of its leafy fibre, to carry gradually off the surplus rain-water over what the soil, loosened in plowing, can hold in suspension; and to replace the original vegetable matter, as it becomes broken down and disappears from constant tillage, we may keep

our hill sides from deterioration, and even improve upon their original condition.

The latter improvement must be effected by a judicious rotation of crops, which shall include green-fallows. The former by the means of hill-side ditches, horizontal rows and deep plowing.

Hill-side ditches cannot be laid off without a level of some kind for determining the *fall* to be given. Various instruments are employed for this purpose. The spirit-level is the one we have hitherto used. It is home-made, cheap, simple and effective; consisting of a tripod, to support the level at a convenient height; of a fixed immovable frame which sits firmly on the tripod; a triangular frame or sight-table, by means of which the level is regulated. It admits of a greater extent of levelling being done from one spot, than any other we have seen; but requires more judgment in regulating by it the *fall* of ditches, winding along the hill-sides than the one we now use.

The Rafter level is the one most commonly employed, and, though somewhat laborious in the using, is easily made and tolerably effective. It must have a ten feet span, and be as light as possible to have sufficient strength, and with substance enough to prevent warping. The two main pieces may be about seven feet long. When made, its correctness may be tested by placing the instrument on a level floor; suspend the plumb, which should be of lead, and as large as a hen's egg; mark the spot where the line crosses the lower bar; reverse the position of the feet, placing each one on the spot where the other stood



and again mark where the line crosses; the centre between the two marks shows the *dead level*. When on a perfect level, raise one foot of the instrument half an inch, and make a permanent mark where the string crosses; do the same at an inch, an inch and a half, and two inches. Bring the instrument again level, and repeat the same with the other foot. These marks show the *fall*—half inch, inch, and so on—in every ten feet. By far the greatest extent of leveling and laying off of guard-drains, in the Southern country has been done with this instrument. And though upon the whole, doing the work slowly and by no means perfectly, its simplicity is yet no slight recommendation.

Other instruments have been recommended, but, with the above, are all more or less defective. We have, after

years of experiment, perfected an instrument, which proves, on trial, to be as nearly the thing that was needed as we sought to make it.

It is a table or ring of brass which rests upon a steel point, supported on a tripod, and which is brought instantly into a true horizontal position and kept there by a heavy plummet. I claim the combination and arrangement as my own; and if it is found to answer fully, the purpose intended, after a year or so of frequent use, I shall apply for a patent and have the instruments manufactured in as cheap a style as possible, that all may have a good and serviceable instrument who desire one.

THOMAS AFFLECK,

[in *Southern Rural Almanac.*

[TO BE CONCLUDED.]

SLAVERY AS IT IS!

THE New York *Herald* holds the following sensible and correct views on the slavery question:

"All this mock philanthropy about human freedom, liberty, and the horrors of Southern Slavery, is mere stuff and nonsense. The real question is union or disunion. The African race, whether as slaves in the South or 'free-colored Americans' in the North, occupy the position, socially and politically, of an inferior race, and properly so, and simply because the great Creator has made them an inferior race. In the same community with the white man, the black, enslaved or emancipated, must forever occupy a degraded position. In a community purely African, even the civilized black relapses again to African indolence and barbarism. See Hayti; see Jamaica. Stop the supplies of christianized recruits from our Southern States to Liberia, and that republic, in the space of two or three generations, would probably degenerate into a petty kingdom of cannibals, with a savage beast as their ruler, horrible and bloody as the King of Dahomey. The three millions of the African race, the most enlightened and the happiest in the world, are the three million slaves of our Southern States."

SHEEP-KILLING DOGS.—The *Indiana Farmer* is "down" on their Legislature for not enacting laws for the protection of sheep against dogs. After alluding to the negligence of the "assembled wisdom" on the subject, our contemporary says:

"In the existing state of things, sheep-raisers have a law of their own, the most important provision of which is a well loaded and ever-ready musket. This law is of course clandestinely enforced, which has doubtless a tendency to create in the minds of boys and young men, who are generally encouraged to become the executioners, a disposition to violate all laws which do not correspond with their notions of right and expediency. But enough. The Legislature doubtless finds matter of great importance, at least in the eyes of its members, on which to spend the people's money. Wonder if it ever occurs to them how large a portion of their pay is furnished by farmers, and how large a proportion of these are sheep-raisers? If the Legislature will not afford any protection to the wool-growers of the State, we will try to take care of ourselves—that's all."

MANAGEMENT OF MANURE HEAPS.—One of our exchanges has a communication from Mr. Austin, Manchester, England, who says that upwards of a ton of horse manure is produced in his stables daily, and the usual odor and evaporation entirely prevented by sprinkling over the heap a solution of a pound of green copperas in a gallon of water. This application also fixes the ammonia and strengthens the manure.

AN ALARM CLOCK FOR PLANTATIONS.

EDITORS SOUTHERN CULTIVATOR—Permit me, through the medium of your valuable paper, to inquire whether or not, there is such a thing as a plantation Clock? It often happens on a plantation, that the overseer or driver, is not at his post just at the proper time in the morning to start all hands promptly, thereby causing confusion and disorder, rarely restored during the day.

Now, what I want, is, an alarm clock, of sufficient size and capacity to ring, or put in motion, a 50 or 60 pound bell, so arranged as to alarm at any hour desired. If there is such a thing in use, where can it be had? If there is nothing of the sort known, who will make one, or suggest the best plan and send to the September Fair?

S. H. C.

Red River, May, 1855.

REMARKS.—If your overseer *sleeps at home*, a common alarm clock ought to be sufficient to awake him, at any hour desired. If you wish a clock large enough to wake up every person on the plantation, you can have it made at a cost, probably, of \$30 or \$40, by addressing C. JEROME, Clock Manufacturer, New Haven, Conn.—Eds.

COTTON RAFTED!—AN IMPORTANT INVENTION!—The New York correspondent of the *National Intelligencer* says:

"An enterprising gentleman named G. R. Griffith has been perfecting an invention by which cotton may be got to market and the seaboard, in spite of low water in the Southern rivers; and he left here this afternoon for the South to demonstrate the practicability of his invention to the planters. The plan is very simple, being merely the adoption of a kind of vulcanized India rubber bag, so constructed that any number of them may be connected together in the fashion of a raft, and either towed down the shallow streams by a steamer of light draught or piloted by hands on the cotton, two men being able to manage one hundred bales. Twelve inches of water is amply sufficient for the transportation of cotton by means of these patent floaters; and if they can be successfully introduced the condition of the streams hereafter will be no barrier to supplying the markets with the great Southern staple. Mr. Griffith gave a practical exhibition of his inventions at this port a few days since, and I believe entirely satisfied those present of the feasibility of the plan."

A VALUABLE COMPOST.—Near every dwelling, but a little out of the way, there should be a place, vat or cistern prepared, where all the scrapings of the door-yard and litter from the garden can be conveniently deposited. Where likewise should be thrown all the woolen rags and other refuse stuff, such as old boots and shoes, bones, &c., usually committed to the flames by the neat housewife, upon every return of that ever-to-be-dreaded "festival" commonly denominated "house cleaning!" Into this receptacle throw all your brine and soap suds on washing days and ashes and lime rubbish where leaches are emptied; add occasionally a wheel-barrow load of muck, loam or turf, and you will find at the end of the year, that you have a quantity of excellent manure, far more valuable for many purposes than barn-yard manure.—*Ontario Times.*

Nothing is purer than modesty—nothing sweeter than charity—nothing brighter than virtue—nothing warmer than love. These united in one mind, form the purest, the sweetest, the richest, the brightest, and the most steadfast happiness.

DOUBLE ACTING CHURN--INQUIRY.

EDITOR'S SOUTHERN CULTIVATOR—I recollect of having seen, some years ago, in some newspaper an advertisement of a churn called, if I recollect right, "the double acting rotary churn," in which butter could be churned from milk in from three to five minutes. I have sought for the advertisement in all the old and new papers I could find and have not found it. If you or any of your subscribers will inform me where and from whom such a churn can be obtained I shall be greatly obliged.

Yours truly, J. E. SPARLIN.

Blainsville, Ga., May, 1855.

DISEASE IN HOGS--WHAT IS THE REMEDY?

EDITOR'S SOUTHERN CULTIVATOR—If you, or any of your numerous subscribers know anything that will *prevent* (for I believe to *cure*, after it has taken hold, is almost impossible) a disease common among the hogs of this country, I would be very glad to know it.

In the summer of 1850, my shoats were attacked with something like the blind staggers, and a great many died. I cut their tails off and remarked them; some few recovered. Seeing they were affected similar to a calf I had some time previous, (said to be poisoned with a kind of barren whortleberry, which I cured with strong coffee,) I concluded to try the same remedy, and succeeded in curing every one that I drenched with it; some, however, died before I could apply the remedy. Perhaps this remedy may prove of benefit to the stock Mr. ANDREWS speaks of in your February number.

Our hogs throughout this region are similarly affected now, (as to the symptoms) from small pigs to the largest hogs, especially breeding sows, and pigs; but the same remedy will not answer. I drenched one some time since in three minutes after it was taken, and it died almost instantly, which induced me to cut it open, and I found its wind pipe and lights (or lungs) filled with a bloody froth; also, its lights had two holes in them, and blood settled through them, and they were quite tender or putrid. This disease prevails to an alarming extent, as far as I can hear from, in this country. Out of some 70 pigs, I have only about 20 left, and I believe all of them have had it slightly.

S. W. McGEHEE.

Lehi, Ark., 1855.

In addition to the article in our last, on the same subject, we present the following, from the *Baltimore Patriot*:

NUTRITIVE QUALITIES OF FOOD.

At the present time of high prices of all kinds of human food, it has been thought advisable to lay before the public, in a plain and comprehensive form, the comparative quantities of nutriment contained in the principal articles used as food. The analyses have been obtained from the works of the best and most celebrated chemists. It is proper to state that the articles were all reduced to a perfectly dry state by evaporating the water they contained, and then subjecting them to careful chemical analysis. The following table, divided into three parts, animal food, vegetable food, and fruit, shows the quantity of nutritive matter and of water in each article, and by comparing one article with another, shows the comparative value of each as food. But as all the elements of nutrition are not of the same value, it must not be inferred that an article that contains a large quantity of starch for example, is more nutritious than one that contains a small quantity of animal fibrin and no starch. Both starch and animal fibrin are elements of nutrition, but they are appropriated by the animal economy to very different purposes, the former to the formation of fat and animal heat, and the latter to the

supply of all the tissues, bone, muscle, &c. The two elements are required in very different proportions also, in forming food, and hence *bread*, (though "men cannot live upon bread alone,") with its 15 lbs. of vegeto-animal matter, (gluten), and its 50 lbs. of starch and 35 lbs. of water, forms a composition of nutriment more nearly complete than any other substance. Starch is required in a much larger proportion than gluten, in vegetable nutriment, and it is furnished abundantly in all kinds of grain, beans and potatoes. If potatoes contained a small proportion of gluten, say 5 lbs. to the 100 lbs., then their nutritive property would compare with that of wheat flour in the proportion of 22 1-2 to 90. That is, potatoes would be worth just one-quarter as much by weight as wheat flour. But as they contain no gluten or casein, and very little albumen, consequently, little if any of the elements of proteine, a larger quantity of animal food of some kind is required to be combined with them than with bread, in the formation of food:

ANIMAL FOOD.

100 lbs fresh beef contain	26 lbs. nut. matter,	74 lbs water
" " Veal "	25 "	75 "
" " Mutton "	29 "	71 "
" " Pork "	24 "	76 "
" " Fowls "	26 to 30 "	70 to 74 "
" " Fish "	18 to 20 "	80 to 82 "
" " Milk "	7 1/2 "	92 1/2 "
" white of Egg "	14 "	86 "

VEGETABLE SUBSTANCES.

100 lbs wheat flour contain	90 lbs nut. matter,	10 lbs water
" Corn meal "	91 "	9 "
" Rice "	86 "	14 "
" Barley meal "	88 "	12 "
" Rye flour "	79 "	21 "
" Oatmeal "	74 "	26 "
" Potatoes, "	22 1/2 "	77 1/2 "
" White beans "	95 "	5 "
" Carrots "	10 "	90 "
" Turnips "	4 1/2 "	95 1/2 "
" Cabbage "	7 1/2 "	92 1/2 "
" Beets "	15 "	85 "

FRUITS.

100 lbs Strawberries contain	10 lbs nut. matter,	90 lbs wat.
" Pears "	16 "	84 "
" Apples "	17 "	83 "
" Cherries "	25 "	75 "
" Plums "	29 "	71 "
" Apricots "	26 "	74 "
" Peaches "	20 "	80 "
" Grapes "	27 "	73 "
" Melons "	3 "	97 "
" Cucumbers "	2 1/2 "	97 1/2 "

N.B. It must be borne in mind that the animal substances were all clear of bone and fresh, the vegetables fresh and deprived of skins, &c., and the fruits fresh and perfect. It will be perceived that *Mutton* is the most nutritious, as it is acknowledged on all hands to be the most wholesome of all animal food; that white beans are the most nutritious of all vegetable food, and plums are the most nutritious of all fruits; that fish is the least nutritious of solid animal food; turnips the least so of all vegetables, and cucumbers the least nutritious of all fruits. G. B. S.

Four articles that furnish nutriment to plants are supplied by the atmosphere, viz: Carbonic Acid, Oxygen, Nitrogen, and moisture; the use of the earthy parts of the soil is to furnish a support and matrix for the plants to vegetate in, to administer the proper quantity of water, to promote the putrefaction of the putrescent matter, and to serve as a solvent to prepare the food properly qualified for its reception by vegetables.

THE TERRELL PROFESSORSHIP.

OUR friend, WILLIAMS, of the *Hernando (Miss.) Advance*, thus discourses of the munificent gift of Dr. TERRELL, and its prospective advantages, and delivers an excellent rural lecture to non-progressive farmers and planters:

"Dr. Terrell, of Sparta, did more good for the people of Georgia when he established the Agricultural Professorship in the State University, than if he had established a dozen medical colleges, with as many law professorships. We mean no disrespect to either of these important branches of knowledge. They are useful and even indispensable in this age of civilization and progress—but they are both overstocked, filled to repletion. These branches of learning are considered honorable as well as profitable, because they require application of mind, persevering industry, laborious reading, &c. Farming has never been recognised as a *science* with us, and any man has thought himself fully qualified to make a farmer without any of the prerequisites that attach to law and medicine. When young men at the University of Georgia graduate in this new department, they will have very different views of the planter's position. They will know that it requires investigation and research, profound thinking, as well as practical experience; and being acquainted with the elementary principles upon which the science is founded, they will have a field of study before them, calling for the ablest minds and the most constant application. When this can be fully impressed upon our people, a man will no more be thought to be a *farmer*, because he knows *when and how* to plant corn and cotton after the *usual practice*, than would a *justice of the peace*, with a few *plain statutes* and a *little form-book* before him, be taken for a *jurist*. Notwithstanding farming is the common business of our people, it is almost wholly unknown as a science; and men seemingly well informed upon other matters eschew the very idea that it is a business calling for the least research. Many go so far as to ridicule agricultural journals, and call them humbugs, so conceitedly wise are they in their profound ignorance. Had these men had training under some able agricultural chemist, like Dr. Lee, of the Georgia University, and mingled with the dog Latin and worse than dog French which Alma Mater manufactured for them, a little knowledge of the constituent parts of soils and minerals, the laws of vegetation, the decomposition of matter, the influences of light, heat and moisture, they would have had very different ideas, not only of their business, but of themselves. Observing, however, how their ancestors farmed, and knowing that they got rich at it, and being themselves in pursuit of the almighty dollar only, they adopt the same plans, little dreaming that those plans were wasteful and self-annihilating. Had our ancestors understood and practiced agriculture as a science suitable to the peculiarities of latitude and longitude, there would not have been one deserted farm from old Jamestown to Savannah; Virginia, the Carolinas and Georgia to-day would have been immeasurably richer under the fostering and self-protecting agency of science as applied to agriculture, than they were with all the fertile elements of their primeval forests. Instead of bleak and bare hills, frightful gulches, exhausted plains, and all the other concomitants of poverty, every farm would have teemed with the energies of a strong and vigorous soil. If all these waste places were allowed to speak, when asked 'how come you given up to the briar and thistle?' their answer would be '*ignorance of the laws of agriculture.*'"

"Georgia, or at least the generous and noble minded Terrell, who endowed the Professorship, has set a worthy example for our Southern States to follow. In our schools and colleges is the place to teach the *principles of agriculture*. We hope that a new era is dawning in the history of cultivating the soil in the South. If other States and

other colleges will do as the State University of the Empire State of the South has done, the business of farming will soon be as tempting to the ambition of talented and educated young men as the pursuits of law and medicine. From the mere clod-hopping business that it now is, filled with industrious practical men, it will engage the minds of research and profound study, producing more on a single acre than is now produced on three or four, with a perpetually increasing fertility, as in the rural districts of England, Belgium and Holland."

BLESS GOD FOR TREES.

BY MARY F.

Bless God for trees! they lift on high
Their breezy banners to the sky.
A verdant canopy that shames
The proudest domes of regal fanes;
And give a tide of music birth,
Matched by no other sound of earth.

Bless God for trees!—for leaf and bloom,
That upland now, and glade perfume,
For luscious fruits in autumn time—
For glorious tints when past their prime—
Earth's fairest beauty—sweetest song
Unto the greenwood tree belong!

Bless God for trees! the fainting herd
Rest 'neath them with the warbling bird,
And chew the cud, and sing their song
While summer hours the day prolong.
List to the music of the breeze,
And beast, and bird; bless God for trees!

Bless God for trees! that bright green crown
Seems like an Eden in the town;
As precious to the aching sight
Amid the dazzling glare of light;
As haven to the storm-tost ship,
Or streams unto the thirsting lip.

Bless God for trees! how proud they stand—
A temple reared by God's own hand;
Weaving a roof above our heads,
That like another heaven outspreads;
While every leaflet seems an urn,
Which incense sweet to Him doth burn,

Bless God for trees! did he not deign
Aught other witness of his name,
The yearly miracle that clothes
Their naked limbs each spring with robes,
And keeps them fresh thro' summer heat,
The atheists cavil all could meet.

Bless God for trees! the jeweled sky,
Their glory now can scarce outvie;
And not the stars in golden pride
Do mortal follies more deride,
Than the proud monarch of the wood,
Unmoved for centuries, doing good.

Bless God for trees! the children play
Beneath them in their glad spring day;
And the last thought that lingers round
The old man's death-bed, is the sound
Of breezy rustle in the tree,
'Neath which exhaled his boyish glee.

Bless God for trees! glory and might,
Beauty and strength, and life's delight,
They symbolize unto the heart;
And each joy and woe take part.
Oershade the tryst of youthful love;
And, sadly, mourn the grave above.

[*Memphis Appeal.*]

INTERIOR DEPARTMENT.—*Agricultural Division of the Patent Office.*—*Mexican Guano.*—Messrs. Thompson & Oudelsays, of Baltimore, have advised the Patent Office that they have lately imported a large supply of Mexican guano, which contains from 35 to 60 per cent. of phosphate of lime. It is already an established fact, resulting from many experiments in Maryland, that in most soils a mixture of 250 to 300 pounds of this fertilizer with 100 pounds of Peruvian guano per acre will act as well for the present and better on future crops than Peruvian alone, the cost being the same. The utility of mixing Peruvian with Mexican guano is obvious from the fact that the Mexican abounds in several fertilizing constituents which are deficient in the Peruvian, so that a mixture will possess the valuable properties of both.

DEEP PLOWING—SURFACE CULTURE—POST OAK LAND.

EDITORS SOUTHERN CULTIVATOR—In the March number of your valuable journal you extract from the *Louisville Journal*, relative to the nursery of Messrs. ELWANGER & BARRY, in which Mr. E. says to the *Journal's* correspondent, "He had no need of artificial watering; on the appearance of dry weather he employed additional hands to keep the surface of the soil constantly mellow by the use of the cultivator." You proceed to remark: "This, if applied in time and repeated, is the great and sure remedy for drouth, in the nursery or corn field."

In this country, drouth is what we most fear, consequently a sure remedy would be of incalculable advantage; but I have always been of the opinion that the *Cultivator* universally recommended deep plowing as the only remedy for drouth, not surface scratching. This is to me a matter of deep interest, and I would like to see something from you on the subject, in the next or some succeeding number.

In regard to the management of Post Oak Glade Land, JAMES THOMAS gives your subscriber, of Clinton Texas, some excellent advice; but I think my plan a better one. These glades must first be properly ditched. Then, as Mr. THOMAS says, bed up with a Dagon plow 5 inches deep, (or 8 inches, if he can,) and subsoil each furrow to the depth of 10 inches more until the bed is completed, and see if the result does not pay for the trouble. Then follow Mr. T.'s plan of cultivating. Will Mr. T. try the subsoiling and let me hear of the result through the *Cultivator*.

Respectfully yours,

L. P. S.

Collinsburg, La., April, 1855.

REMARKS.—Our correspondent is mistaken in attributing to ourselves the language of the *Journal's* correspondent, which we have placed in italics; though we, in no particular respect, differ from that writer in the views expressed. The *Cultivator* and its editors always have "recommended deep plowing" as the surest if not the "only remedy for drouth;" and there is nothing in the extract alluded to, to prove that Messrs. ELWANGER & BARRY do not believe and practice deep plowing or subsoiling. It is of the after-culture that Mr. BYRAM is speaking—the culture of the surface, merely, when crops are growing; and we believe with him that this, if properly and frequently practiced, tends, in a great measure, to avert the evil effects of drouth. Where practicable, however, the most perfect system is this:—Plow your land as deeply, manure as highly, and pulverize as finely as possible, before planting your crop, and when your trees begin to grow vigorously give them one good working with a cultivator or horse-hoe, and then cover the entire surface with a

thick mulching of pine straw or any other trash that will keep the sun's rays from the surface, and prevent weeds growing; thus doing away with the necessity of any further working during the season. We know this to be impracticable on a large scale, in field culture; but, for all horticultural amateurs, gardeners, or nurserymen it is invaluable.—Eds.

THE LOCUST—CROPS IN HENRY COUNTY, GA., &c.

EDITORS SOUTHERN CULTIVATOR—In some of your numbers you requested some one to give you a history of the appearance of the Locust. I will take the liberty to do so, and as, perhaps, some of your readers will be curious to know where and how they originate, I will give you a short history:

I was plowing in the field on Saturday last, and my attention was attracted by seeing them crawling and fluttering over the ground; this excited my curiosity, which caused a close examination. I found that they made their way through the earth, then would crawl up some bush, stump or tree, sticking their claws in the same and shedding or hatching the shell or egg, opening on the back. After shedding they are very feeble, (not having the use of their wings,) and can only crawl, and in the course of some half day they become invigorated and commence flying, (the shell remains hanging where they hatch.) They are near the size of a large horse fly, of a dark brown glossy appearance; on the front part of each wing is a very correct model of the letter "W." I, to-day, counted, on one small peach tree, some hundred and twenty or thirty shells hanging on the leaves and body, besides quantities lying on the ground, and I think you might count some five or six hundred holes in the earth within the compass of two rods square, where they have made their way through. They appear to be coming out promiscuously over the earth, though principally about stumps or trees. I am not able to account how, why, or from what source they spring, only that they come out of the ground. We anticipate serious damage to our crops from them, though have not yet made any discoveries as to what they will prey upon for sustenance.

As regards the crops, there is a very gloomy appearance, it not having rained for several weeks; the earth is parched, corn and cotton dying, and not more than half a stand of either; wheat and oats are withering, and if it does not rain in the course of one or two weeks, neither of them will be worth cutting. The grass-hoppers are appearing in great numbers, and are eating up the young corn.

Provisions in the country are nearly out; many are entirely out. (We think it best to keep our cribs locked, for fear some that are out should be broken of their rest at night.) It is "hard times," and we fear worse are coming, though we look forward with hope to the morrow.

I am, sirs, truly yours,

L. W. P.

Henry county, Ga., May, 1855.

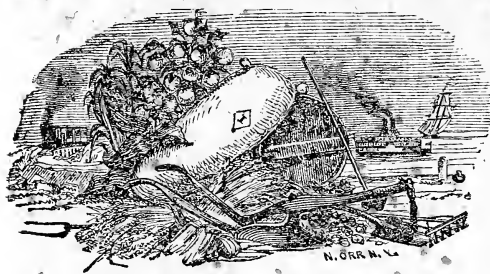
CURE FOR RHEUMATISM—BLISTER WEED.

EDITORS SOUTHERN CULTIVATOR—In the February number of the *Cultivator* I see a notice (under the signature of A. T. P.) of a cure for Rheumatism. I will state that the vine grows in great abundance in this neighborhood, and is known by the name of Blister Weed.

I have known it to be used in some cases with success. Any person wishing to make a trial of it, by addressing a few lines to me at Wekadkee P. O., Randolph co., Ala., can have some sent to them by mail.

Yours truly,

J. EICHELBERGER.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 7..... JULY, 1855.

ANSWERS TO INQUIRIES, &C.

PATENT HORSE COLLARS.—J. P.—The collar you speak of has not been introduced here, yet, we believe. It is an undoubted improvement, and worthy of the attention of all lovers of that noblest of quadrupeds, the Horse. We see it advertised in the *Ohio Farmer*, by J. W. BRIGGS, of Cleveland, Ohio, to whom you should address your inquiries.

LICE ON CATTLE.—*Farmer.*—A correspondent of one of our Northern exchanges says:—"I have been very successful in removing lice from cattle by the use of sulphur, given in doses of from one to three teaspoonfuls, and from once to three times in two weeks, according to age and circumstances. The blood of the animal, upon which the vermin subsist, becomes impregnated with the sulphur or some property contained in it, and the consequence is, I have seen legions of them clinging to the hair and dead, as you, no doubt, have seen grasshoppers sticking to a thistle, or some other object, after a severe frost in the fall."

CLOVER IN THE SOUTH.—G. Y. B.—We will endeavor to publish the very able essay of Col. CROOM, of Ala., in our August number. A slight and late spring sowing of *Alsike Clover*, on a dry and rather clayey bank in our garden has already made a thick growth of six or eight inches high. It is all moonshine to talk of the climate and soils of the South as not adapted to the growth of Clover. We all know that *Lucerne* grows most luxuriantly among us wherever it receives the least attention, and Red Clover, will do equally well, with proper management.

CORN, COB AND SHUCK GRINDER.—C. B. McG.—We do not know of any machine that will fully answer your purpose, except Rowe's, which is not portable. The "Little Giant" and "Young America" machines crush corn and cobs, but not shucks. Address J. ROWE, Tampa Bay, Fla.

LUCERNE.—Geo. D. N.—Sow Lucerne in drills, 2 or 3 feet apart, last of August or first of September—make the ground very rich, deep and mellow—use ashes and plaster as a top-dressing after the plants are well up—keep the ground between the rows free from weeds and well pulverized with a bull-tongue or cultivator. It is perennial, and you can cut it 4 or 5 times a year, if not oftener. It is good food for stock either green or cured. (See *Southern Cultivator* Vol. 11 (1853) pages 101-194.) Sown in the drill, 6 or 8 quarts of seed per acre is sufficient—if broadcast, it will require half a bushel. It will not do to pasture cattle upon it, but is especially adapted for soiling.

SUNFLOWERS.—I. B. J.—The seeds of this plant produce an oil said to be excellent for burning, and equal to the best olive for the table. An acre often produces 75 to 100 bushels, if plowed deep and manured highly. A bushel of seed will yield about a gallon of oil. Sow in 4 foot drills, dropping 2 seed every 6 or 8 inches, and thin out to a proper distance as the plants come up. Four or five quarts will plant an acre. Cattle, horses and mules will eat the leaves readily, and after the oil is pressed from the seed, the pomace or oil cake is very fattening for animals of all kind. Poultry are fond of the seed, after they once get a taste of it, and it improves their flesh wonderfully. Upon the whole, a most valuable plant, and worthy of more attention than it receives among us.

BOTS—CORRECTION.—W. P. W.—Your note will appear in our next. Thanks for your attention.

HOO SUNG—Elbert.—This is a Chinese vegetable, said to have been introduced and described in Hovey's *Magazine of Horticulture*, for 1849, by Dr. WENDELL, of Albany, New York. It may be easily raised by sowing the seeds in a hot bed and transplanting the seedlings to the open ground the latter part of March or first of April. It grows about two feet high, and the succulent stems are the part used. It is cooked and eaten in the same way as asparagus, and is a very agreeable and pleasant addition to the list of vegetable esculents.

THE HORTICULTURIST.—W. S. M.—We ordered this magazine for you some time since; but some little delay or confusion may have arisen by the transfer of its place of publication from Rochester, N. Y., to Philadelphia. If it fails to reach you regularly, hereafter, please let us know.

OREGON PEA.—J. D. J.—The seed may be had here at 50c. per quart. There is still a great diversity of opinion as to its value. It has probably been *overrated* and *underrated* too much.

WOOL-GROWER.—W. D.—The "Wool-Grower and Stock Register" is published by D. D. T. MOORE, Rochester, N. Y., at \$1 per annum, in advance.

WILD ONIONS.—"A Subscriber" wishes to know how to extirpate these foul weeds. Who can tell him?

A. D. B., *Blossom Hill, Caddo, Parish, La.*—We will endeavor to answer your inquiries in our next, to the best of our ability.

MICHIGAN PLOW, &C.—W. D. G.—This plow is too heavy to use for "bedding up" land. It is chiefly valuable as a turning-plow for old grassy fields, free from stumps and roots. In a light soil, two good mules, with a skillful plowboy at the handles, can run a furrow 8 or 10 inches deep and a foot wide, completely reversing the sod and burying all the surface trash under a layer of earth brought up from the bottom of the furrow. The Michigan Plow has two mould-boards, the forward one being suspended from the front part of the beam—the depth of the furrow is regulated by a wheel. For the purpose mentioned above, it is the most perfect plow extant. If you want a deep running, light plow, for "bedding up," order the "Peacock Plow, No. 1," from CARMICHAEL & BEAN, of this city. We will report more fully on the *Holcus Sacharatus* (Chinese Sugar Cane) when we have given it a fair trial. The "Canada Prolific" Corn, and "Stowell's Evergreen," are highly recommended for fodder; but we never could succeed with Stowell's. (See remarks on Fodder Pulling, in "Work for the Month.")

GRAPE CULTURE IN THE SOUTH.—J. S. G.—Nothing like a complete treatise on Grape growing in the South has yet been written, that we are aware of; nor do we believe that the experience of our people yet furnishes the material for such a treatise. In the hope of eliciting information, we will publish your inquiries in our next, and would,

in the meantime, refer you to such works as the following:—"Practical Treatise on the Culture of the Grape," by J. FISKE ALLEN; "HOARE on the Grape Vine;" "The Culture of the Grape and Wine Making," ROBT. BUCHANAN; "The Cold Grapery," by WM. CHARLTON, &c., &c. Also, the articles of the late SIDNEY WELLER, and others, in back volumes of our own and contemporary Southern journals.

PRECOCIOUS BIDDIES.—L. M.—Your hen story is by no means "marvelous." We have a Brahma pullet, hatched latter part of January, present year, that has already laid out her brood of eggs (some 25 or 30) and gone to setting. She is now (June 20th) scarcely five months old! A black Shanghai pullet, of the same age, has also commenced laying. Neither of these are more than half-grown, but they have had extra care and attention, and *wheat* has entered largely into their food. They have also had a wide range in the fields and woods, which, of course, was a great advantage.

✂ We are as, usual, obliged to defer until our next, the answers to several inquiries received just as we are going to press.

ALABAMA STATE AGRICULTURAL SOCIETY.—We have received the List of Premiums for the First Annual Fair of this Society, to be held in the city of *Montgomery*, from the 23d to the 26th of October next. The list is extensive, liberally and judicious, and should produce a fine display of the agricultural, mechanical and artistic skill of our sister State. We wish the Alabama Society the most gratifying success, and hope there will be a brisk and generous competition for the first premium on the list, which reads thus:—"For the largest amount of money, contributed by an individual or firm, to this Society's funds—a Silver Pitcher, \$25."

CROPS IN SOUTH WESTERN GEORGIA.—A subscriber, writing from Thomasville Ga., under date of May 30, says:

"Our crops are beautiful, as most delightful showers are now refreshing our lands, (after an exceedingly dry spring,) and rapidly advancing vegetation. Our country is also fast developing its superior advantages, and bids fair to be the most desirable portion of the State."

Truly Yours, C. B. M.

PHYSALIS EDULIS—CORRECTION.—In his article on this new plant (June number, page 194) our friend NELSON is made to say that "the *Physalis Alkekengi* is considered very *unwholesome*," where it should have read "*wholesome*." We are assured by Mr. N. that the *Physalis* is quite an acquisition, and we hope to see it generally cultivated.

DEFERRED MATTER.—"Brief Notes on *Strawberries*," and various interesting communications intended for this number, are unavoidably laid over until our next.

NEW ADVERTISEMENTS.—The especial attention of the reader is called to the following new advertisements, in present issue:

Fertilizers.
The Illustrated Horticulturist.
To the Planters of the South.
Plantation for Sale.
Augusta Seed Store.
Merino Rams for Sale, &c.

THE SEASON, since our last, has continued quite favorable. We have been blessed with several fine soaking showers, and crops of all kinds, present a very cheering appearance. Will our friends in different sections send us brief notices of the state of the crops, as the season progresses?

MISPLACED CREDITS.—We find a portion of our article on "*Grouting*," &c., (from June number, page 186) transferred to the columns of our friend, FREAS, of the *German-town Telegraph*, and credited to the *Michigan Farmer*; but, as if to sustain the doctrine of "compensation," the *Arkansas State Gazette and Democrat*, of June 8, comes to us, all the way from Little Rock, with a long piece of poetry that we do not remember to have ever seen before, credited to the *Southern Cultivator*. All right, friends! Only (as in this instance) give us more than you take from us, and we cannot help being satisfied.

The poem alluded to, "THE LOGAN GRAZIER," from the pen of THOMAS DUNN ENGLISH, is a good one, and as the *Cultivator* has received credit for it, it shall not be withheld from our subscribers. Look for it in our next.

FOSTERING ALL BUT AGRICULTURE.—It is said that the Agricultural Bureau which had been attached to the Patent Office, is to be discontinued in a week or two; the appropriation for it being exhausted. Most of the clerks have been already transferred or dismissed.

We do not, however, hear that the Army and Navy Bureaus are to be discontinued, or that there is to be any discharge of clerks and other worthless hangers-on from the War Department! It is high time that the PEOPLE should derive some benefit from the immense sums of money yearly appropriated on all sorts of frivolous pretexts by Congress. The Agricultural Bureau must not be discontinued! To be sure, it has not done all that was expected from it; but it keeps alive a spirit of inquiry and interest in agriculture, and it should not be thrown aside until it has a longer and fairer trial.

TO CORRESPONDENTS.—Communications have been received and are on file from the following and others:

A. G. S.—H. J. A.—W. R. B.—J. N. L. S.—J. B. C.—John Farrar—J. S. G.—James McCullough—George D. Norris—W. W. A.—Farmer—W. P. W.—B. Brewster—J. B.—H. H. H.—W. N. W.—G. T. A.—Blanc—A. D. B.—J. R. S.—E. S.—Mrs. W. G. E.—A. C. H.—J. D. H., &c., &c.

THE SUGAR CROP.—We take from the *Alexandria Republican* of the 21st ult., the following unwelcome news concerning the sugar crop:

"We have lately received accounts of the sugar crop that are of a most deplorable character. It seems that the long drouth we have had has ruined, almost destroyed it. The plant cane is completely dried up, leaving not the first sign or prospect of its ever going to seed; and the ratoon cane, for the most part, is equally unpromising. It is thought that the growing crop will not turn out as much cane as will be required for the next year, and that if the condition of the crops in other parts of the State is no better than it is here, there will not only no sugar made, but that seed will have to be imported from abroad."

OUR BOOK TABLE.

COTTON IS KING: or the Culture of Cotton, and its Relation to Agriculture, Manufactures and Commerce; to the Free Colored People; and to those who hold that Slavery is in itself sinful. By an AMERICAN. Cincinnati: MOORE, WILSTACH, KEYS & Co., 25 West Fourth st. 1855.

This little volume contains by far the most complete and perfect summing up of the history of Cotton Culture, Export and Manufacture, that we have yet seen; and upon the "vexed question" of Emancipation, is so calm, just and dispassionate, that it cannot fail of pouring oil upon the troubled waters of sectional prejudice and dissection. Though evidently the production of a Northern (or Western) man, it evinces no narrow-minded bigotry towards the South and her institutions, but by presenting statistical facts and arguments, commends itself to the reason and judgment of all candid readers. It will not, probably, please *ultraists* either North or South, but we think no unprejudiced mind can rise from its perusal without acknowledging the general correctness of the author's views and deductions. Errors of sentiment, (the result of habit and education) may be found here and there throughout the volume; but we can easily forgive these, in an author who is so evidently desirous of presenting a truthful and correct view of his subject. We commend the volume to the perusal and study of our readers, confidently believing that they will each and all derive from it much information, and find in it more to approve than to condemn.

We are indebted to the publishers for a copy, per mail; and the work may be ordered from JAS. J. McCARTER & Co., Charleston, S. C., THOS. RICHARDS & SON, of this city.

THE SUMMER-LAND: A Southern Story. By A CHILD OF THE SUN. New York: D. APPLETON & Co. 1855.

In his preface to this very entertaining volume, the author says:—"With the exception of a change of names, and the coloring of a story, a faithful endeavor has been made to depict a true and honest picture of life and scenery in the South; with sketches of character, customs, etc., among the planters." The scene opens at a school in Paris, from which the hero, Mr. JAN JERED, is transferred to the sugar plantation of his father, in Louisiana. Here, and at a summer residence in Kentucky, he spends the greater portion of his youth in harmless and quiet rural amusements; but, as time goes on, much of the romantic and tragical is evolved, and his life-history grows more interesting and exciting to the close, where the strictest poetical justice is meted out to all parties. The author's sketches of character are well and forcibly drawn, and his passion for the beautiful in nature everywhere apparent. Though a traveller and a "man of the world," JAN JERED is by no means stale or hackneyed—on the contrary, his limnings and lucubrations possess an unusual freshness and originality, and the book is sure to meet with favor among the refined and cultivated readers of our sunny "Summer-Land."

It may be ordered, per mail, from the publishers, or through local booksellers.

A PRACTICAL TREATISE ON THE CULTURE AND TREATMENT OF THE GRAPE VINE: embracing its history, with directions for its treatment in the United States of America, in the open air, and under glass structures, with and without artificial heat. By J. FISK ALLEN. Third edition—enlarged and revised. New York: C. M. SAXTON & Co., Agricultural Book Publishers. 1855.

The culture of the grape is fast becoming an object of national importance, and much interest is everywhere felt in the substitution and use of pure and wholesome *native wines* instead of poisonous alcoholic liquors, and the degraded and adulterated mixtures of commerce. There are

abundant reasons why we of the South should occupy a leading position in Vine Culture, and we are pleased to notice, of late, a greatly increased attention to this matter in various sections of the country. Elsewhere, in our present issue, will be found an account of some very superior *native wine* sent us by ROBERT NELSON, Esq., of Macon, who assures us that the manufacturer, Mr. LEARY, has been very successful thus far, though his operations have been on a limited scale. This and numerous other examples should induce all land owners to devote more attention to the growth of one of the healthiest and most delicious of fruits; and one, too, which generally rewards the cultivator with sure crops and abundant profits. The treatise of Mr. ALLEN contains a great deal of valuable information from reliable sources, and should have a place on the book-shelf of every fruit-grower.

It may be obtained per mail, post-paid, at \$1, from C. M. SAXTON & Co., New York City.

THE PRACTICAL FRUIT, FLOWER AND VEGETABLE GARDENER'S COMPANION, with a Calendar. By PATRICK NEILL, LL. D., F. R. S. E., Secretary to the Royal Caledonian Horticultural Society. Adapted to the United States. From the Fourth Edition, revised and improved by the author. Edited by G. EMERSON, M. D., editor of "Johnson's Farmer's Encyclopedia." With notes and additions by R. G. PARDEE, author of "Manual of the Strawberry Culture." With elegant illustrations. New York: C. M. SAXTON & Co. 1855.

This is an English work, with very careful annotations by the American editor. As a text-book, it is especially valuable, treating, as it does, of many subjects not generally found in works of the kind. It is pre-eminently *suggestive*, and the amount of information which it contains is quite unusual. We do not know any work of the same size that extends over so wide a range of Fruits, Vegetables, Flowers, &c. It is also, very full and complete on the subject of Hot and forcing Houses; heating by Steam, Hot Water, &c. Also, the forcing of the Grape, the Peach, Fig, Pine Apple, &c., &c.

It may be obtained per mail at \$1 25, by addressing C. M. SAXTON & Co., New York City.

THE PRACTICAL LAND DRAINER: A Treatise on Draining Land, in which the most approved systems of Drainage and the Scientific Principles on which they depend, are explained, and their comparative merits discussed. With full directions for cutting and making Drains, and remarks upon the various materials of which they may be constructed. Numerously illustrated. By B. MUNN, Landscape Gardener. New York: C. M. SAXTON & Co. 1855.

While the utility of Drainage is generally recognized and admitted, very few land-owners resort to it: either from a want of knowledge of the proper method, or from a fear of incurring too great expense. As a consequence, thousands of acres of the richest and best lands in the South, lie entirely waste and unreclaimed—recking hotbeds of malaria and pestilence, instead of productive fields of snowy cotton or waving corn. The little work before us contains full, practical directions for all manner of draining and ditching (and incidentally, of irrigation) and deserves a careful study by all planters and owners of swampy lands.

It may be obtained, postage free, for 75 cents, from C. M. SAXTON & Co., as above.

LANDSCAPE GARDENING, adapted to North America, with a view to the Improvement of Country Residences, &c. With remarks on Rural Architecture. Fifth Edition. By A. J. DOWNING. New York: C. M. SAXTON & Co. 1855.

This standard production of the lamented DOWNING is

so well known that any discussion of its merits is unnecessary. It has no rival, in this country, on the subjects which it treats upon, and we doubt not, it will long remain in its present position, a guide and leader in all matters of tasteful rural embellishment. The present edition is very superior in paper, type and binding, and is ornamented with an accurate portrait of Mr. Downing.

It may be ordered from C. M. Saxton & Co., New York. Price \$3 50.

PUTNAM'S MONTHLY has lately passed into the hands of Messrs. Dix & Edwards, 10 Park Place, New York, and it is simple justice to say that under the new management it fully sustains the high literary character for which it has always been distinguished. As an exponent of American thought and opinion, it deserves well of all sections, and will continue to receive support so long as it is conducted in a purely National spirit. We wish the new publishers abundant success. Terms—\$3 per annum. Address the publishers, as above.

HOUSEHOLD WORDS, by CHAS. DICKENS, is republished, also, by the same gentlemen, in neat monthly parts at 25 cents each. Address Dix & Edwards, 10 Park Place, New York.

THE KNICKERBOCKER, our old favorite, continues as scholarlike, genial, racy and amusing as ever. It never flags or becomes tiresome, but presents, each month, some new and attractive feature to instruct and delight its readers.

Terms—\$3 per annum. SAMUEL HEUSTON, publisher, New York.

Several other books, pamphlets, &c., will receive attention in our next.

GREEN PASTURES AND LOWING HERDS.—A travelling correspondent of the Savannah *Republican*, writes thus from Middle Tennessee:

"The best farming country we saw anywhere, is observed on approaching Murfreesboro, formerly the capital of the State; and it was here that we beheld a sight which had not before presented itself to our view—that was, beautiful green pastures, with cattle and horses quietly cropping the tender grass. O, that our own sweet Georgia had many more of these delightful landscapes than she has!—then, with its rolling hills and bright skies, would it be indeed a paradise"

PLANTING IN MISSISSIPPI—DEEP AND SHALLOW PLOWING, &c.

EDITORS SOUTHERN CULTIVATOR.—It gives me much pleasure to add my name to the list of your subscribers. I saw a number of your valuable paper last year for the first time, and was so struck with its adaptedness to the wants of every farmer and of myself in particular, that I immediately resolved to send for the bound volume of 1853, and subscribe for the paper regularly in future.* The volume has come to hand, beautifully bound, and with but one fault, viz: that the Binder put in two July numbers and no August number. With this single exception it is the most complete thing of the kind that I have ever seen. Will you be kind enough to send me the August number, of 1853, and the January number of 1854? I have received the February and March numbers but the January number was omitted. As I wish to have all the volumes bound in future, I am desirous of preserving every number.

My experience in farming is of 40 years standing, and embraces the States of Virginia, Alabama and Mississippi. I have been engaged in the culture of Tobacco, Wheat, Cotton and Indian Corn, and have always found

that deep plowing was half the battle. I reside at present in what is known as the "Petit Gulf region." Our soil and climate are admirably adapted to the culture of cotton. The seed from this neighborhood are eagerly sought after and widely disseminated every year through most of the cotton growing States, being generally known, as the "Petit Gulf Cotton Seed." We raise fair crops of corn, but we have not time enough in our soil to give us a heavy yield per acre. Our crops range from 15 to 40 bushels per acre. We are sadly in want of some good plow with which we can follow our ground to the depth of some eight or ten inches.* The plows manufactured here will hardly go in the ground over five inches. The great and prevailing fault with the farmers in this part of the State is that they don't plow deep enough. I don't believe that there is piece of ground in the country broken up six inches deep! The plows in bedding for corn usually cut from two to four inches deep, when they have two mules attached, and they think that they are doing a great business then. I wish that every planter in Mississippi could be induced to subscribe for the *Cultivator*, and would follow its suggestions. I know that we would not then see so many moving to the West in search of land. Our land in this neighborhood (my place especially) is a rich sandy loam, with a red clay subsoil. As soon as the soil washes off or is exhausted by surface cultivation, the field is turned out, and another cleared. The only kinds of manure used here are cotton seed and stable manure. I know of one or two wealthy farmers who have experimented with guano, but it is deemed too costly to put on corn land here. I have no doubt of its efficacy as a stimulus to corn, and believe that every farmer can better afford to pay even sixty dollars per ton for guano than to cultivate poor land enough to make him corn.

I have recommended your paper highly among my acquaintances and think that I shall induce a good many to take it. Persevere, Messrs. Editors, in the noble work you have undertaken so successfully, and I feel assured that future generations will look upon you as benefactors.

In conclusion, I crave your pardon for having trespassed so much upon your time, and beg that you will accept the assurances of the highest esteem of your friend,

J. F. M.

Port Gibson, Claiborne, Miss., 1855.

NUTRIMENT OF ONIONS.—Prof. Johnson gives his opinion in favor of onions as a very nutritious vegetable, and for laboring men, with strong digestive powers, quite healthy.

It is not merely as a relish that onions are used so largely by many people, but because they give strength as well as a satisfaction of appetite.

Prof. Johnson ranks onions in point of nutriment with peas.

In our observations among the city poor we have always found the onion a favorite food, but we had generally attributed it to another cause than because it contained a large amount of nutriment. It is also stimulating and narcotic, and in cold weather, when eaten raw, seems to assist to warm the body and make the want of fire less unendurable.

For weak stomachs it certainly cannot be commended as a healthy food, if it is nutritious.—N. Y. Tribune.

How sublime is the virtue that still plants without any expectation that it shall ever reap. He most emulates the Deity who plants trees for future generations.

*See our notice of the Michigan Double Plow, in *Answers to Inquiries*.

A NOVEL OCCURRENCE WITH BEES.—Mr. V. S. Auglier, a wagoner, relates the following curious facts about hiving a swarm of bees, during his downward trip. The swarm was passing over a train of cotton wagons, when all hands commenced yelling at them and cracking their whips, making such another din as wagoners only can make. The bees became confused and descended, first attempting to settle under the arm of our informant, but prevented from that, they then attempted to light on the uncovered head of one of the party, but as he did not fancy the possibility of a thousand stings inflicted on his cranium, he substituted his hat, and finally got them quietly settled on the crown. The hat was then secured on the top of one of the loads and thus carried 6 or 8 miles to the first farm house, where they were securely hived.—*Houston (Texas) Telegraph. of May 7.*

Horticultural Department.

WORK FOR THE MONTH—(JULY.)

[JULY, being the fifth month of the old Roman calendar, was originally called *Quintilis*, or *fifth*; but afterwards received its present name (Latin, *Julius*) in honor of Julius Cæsar, who was born in this month. It answers to *Ab*, the *eleventh* month of the Jewish *civil*, and *fifth* of their *sacred* year.* The Saxons called it *Har*, or *Hey*-month, because in it they mowed their grass, and gathered their *hay-harvest*; and also *Litha*-after, the *After-mild-month*, in allusion to the mildness of the weather, or, as some think, from "lithan," "to sail," because at this season they made their voyages.]

THE PLANTATION.

Cotton.—Work this crop steadily to encourage the development and retention of forms and bolls. Shallow, surface culture, with light sweeps, followed by the hoe, will be found the best method for the accomplishment of this object. Do not allow the grass or weeds to "come to a stand" either in the row or middles—wage a steady and relentless warfare upon them during this month, after which, they will not give you much trouble. An implement lately introduced from the North, "*Knox's Horse Hoe*," is by far the most perfect and complete Cotton and Corn worker we have ever seen. It does the work of at least 20 (some say 40!) hoe hands, and is unrivalled for the culture of all drill or row crops. Its present price, however, (\$8 or \$9) must prevent its general introduction, and we only call attention to it in the hope that some inventive genius in the South may get up a modification of it in cheaper form—also stronger and more durable, for negro use.

Corn.—In many sections, this important crop is already laid by. Where it is not, however, it will be well to give it a constant *surface working* until prevented by the spreading of the blades across the rows. Allow no weeds to appear in your corn field—both cannot flourish on the same ground. Do not use the plow among your corn after the first two workings. It breaks and tears up the young rootlets, and does far more injury than good. At the last working, sow *Cow Peas* broadcast, and cover with the sweep, cultivator or harrow. Plant, also, *Pumpkins*, in every second or third hill, and when well up, thin to one plant in a hill, and work carefully.

Cow Peas should now be sown broadcast for hay, at the rate of a bushel to six pecks to the acre. Scatter over the surface evenly, and cover with a turning plow; or, first plow your ground deeply, sow your seed, and drag in

with a harrow. *Cow Peas* intended for seed, may be sown in drills, three feet apart.

Pumpkins may be planted as a separate crop. Prepare the ground as for Watermelons; hills 10 feet apart. When well up, thin to one or two strong plants in a hill, give these a sprinkling of Plaster or Gypsum (a small handful to each hill) when the dew is on; loosen the earth, carefully breaking the crust, without disturbing the plant, and then let them run. The after work consists in shallow surface culture, and the destruction of weeds, until the vines cover the entire ground.

Pulling Fodder, we consider a slow, laborious and poor business—one that "does not pay" in any way, and which should be discontinued by all enlightened and economical planters. We confidently offer the following substitute:

Corn Fodder.—Break up, very deeply, a piece of rich land, harrow it finely, and with the bull-tongue, or rooter lay it off in drills three feet apart. In these drills scatter corn at the rate of 40, or 50 grains to the foot, and cover with a hoe, rake or harrow, drawn lengthwise along the drill. When well up, "run around it," pretty close, with a long rooter, and repeat after 10 or 15 days. In the course of 10 or 15 days more, break out the entire middles with the rooter, and finally lay by with the shovel plow, running up and down in the same furrow, midway between the drills. On good land, prepared and worked in this way, the yield will be from 3 to 6 tons, (sometimes even 10) of excellent fodder per acre. This is as much as can be pulled from 20 or 30 acres, in the common way, and at one-tenth of the labor. Pound for pound, it is as good, if not better than pulled fodder, as it contains the *entire juice and strength of the plant*, which, in the other case, has gone to the formation of the ear or grain. The loss of weight and injury to the grain, by depriving corn stalks of their leaves before all growth has ceased, is fully equal to the value of the fodder pulled. We, therefore, desire that our readers should abandon this "old foggy" practice, and give drilled corn fodder a fair trial. It is not yet too late, but should be done *immediately*. Any one who fairly tests it, will, we are quite certain, abandon fodder pulling, forever.

Curing Corn Fodder.—The proper time to cut drilled fodder, is when all the stalks are fairly tasseled out, or in full bloom. It may be cut close to the ground, with a long, sharp knife, or a sickle. Select a dry day, commencing early in the morning, and cutting until dinner time. As fast as it is cut, spread it thin along the row, and let it lie and take the sun, until after dinner, when the upper side will be pretty well wilted. Then *turn it over* carefully, and leave it on the ground until 5 o'clock in the evening, when it must be gathered up, tied in bundles of moderate size (say a foot through at the band) and set up on the butt end, in shocks of 4 or 5 bundles each. The next day, after sunrise, these bundles must be untied and the fodder spread out again until noon, and then turned and sunned till evening, as before. It may then be permanently stacked or packed away under cover; and if, while packing, the different layers are sprinkled with salt, at the rate of say 4 quarts to an ordinary 2-horse wagon load, it will be more highly relished by stock, and all danger of heating obviated. Many persons make a great mystery of curing drill or broadcast corn fodder; but we have always found this simple method sure and effectual.

Cutting up corn in the field, and using the stalk and leaf for the winter feeding of stock, has also many advantages, which we shall speak of more in detail hereafter.

Sweet Potatoes must now be worked carefully, throwing up some fresh mellow earth to the ridges, and destroying all weeds. Make your last planting of "draws;" and if the weather is very dry, before planting dip the roots in a thin batter of muck and water—plant just at night fall—and manage as heretofore directed. As soon as possible,

prepare a rich, moist piece of land, and plant out an abundance of cut vines to produce next year's seed.

Turnips.—Begin to prepare for this valuable crop, which deserves increased attention as winter food for man and beast. Make arrangements to sow often and largely, commencing early, as it is sometimes extremely difficult to get a stand. Make your land rich, plow deeply and often, and pulverize as finely as possible. Make your first sowing about the 20th of this month, and if that should fail, try again every fortnight until the last of September, and your perseverance will be crowned with success. Guano, superphosphate of lime, broken bones, or a compost of woods-mould or well-rotted stable manure with crushed bones and ashes, are each and all proper fertilizers for the turnip crop. The manure may be applied in the drill, or put on plentifully broadcast, and plowed well in. The *Ruta Baga*, *Red Top* ("strap leaf"), *Early Flat Dutch*, *Yellow Aberdeen*, *Norfolk* and *Globe* are all good varieties—the two first, fifth and sixth being the best for field culture. As food for stock, we believe the *Ruta Baga* is conceded to stand foremost.

Draining and Ditching.—The richest land on the plantation is often allowed to run waste, worthless and wild, presenting only stagnant puddles of water, rank grasses, weeds and brambles, and forming a harbor and receptacle for snakes, lizzards, turtles and "vermin" of every description. Now, during the "summer solstice," when the ground is comparatively dry, and the heavy field-work over, is a good time to change these offensive blotches on the face of Nature into cultivated fields of the most productive character. Dig wide and deep under-drains, or open ditches* to carry off the surplus water, cut down and grub up trees, bushes and briars, destroy noxious weeds, &c., &c., and plant the reclaimed ground next spring in Irish Potatoes, Upland Rice, or Corn.

Grass, and Woodland Pastures.—Select "a piece of naturally moist, good land, timbered with spreading trees—cut down and grub out all small shrubbery, briars, brush, &c., leaving only the large trees standing. Then break up the ground as finely as possible, by plowing and cross-plowing with a long, stout, sharp rooter, and seed down heavily with *White Clover*, *Kentucky Blue*, *Texas Musquit*, *Herd*, *Italian Ray*, or other grasses for woodland pasture. Grass will not do well without plenty of moisture, under our parching suns; and to such as are not able to supply moisture and sustenance, by deep subsoiling and liquid manure, we recommend a trial of the shade for their pastures, meadows and lawns, as above indicated.

Weeds and Grass.—All crops on the plantation require particular attention during the present month. The weeds—an army of encroaching marauders—will choke up and strangle everything, unless they are summarily dealt with—cut down and destroy them before they go to seed; and thus prevent present and, (in a measure) future annoyance from them.

THE GARDEN.

The earlier spring vegetables being now nearly all gone, little can be done to advantage. It will be well, however, to clear off or turn under all weeds and the remains of early vegetables and manure liberally, by way of preparation for fall crops. *Celery* seed may yet be sown, but the bed must be shaded from the direct rays of the sun. Sow, also, *Ruta Baga* and other *Turnips*, as directed under the previous head; *Lima* or "Butter Beans;" the *Green Glazed Cabbage*; purple *Egg Plant*, *Radishes*, *Cabbage*, *Lettuce*, *Tomatoes*, &c., for late crops.

Dig or plow your garden over thoroughly, and repeat the preparatory operations of the spring. *Mulch* and water young trees, shrubs, vines and vegetables, using the

liquid manure heretofore recommended, alternately with pure soft water. Prepare the ground for *Strawberry Beds*, during this and the next month. Select new ground near an unfailing stream, if possible—plow deep, turning under a good thick coat of leaf mould and ashes, and leave the surface fine and mellow. We will return to the *Strawberry Bed*, giving more special directions, in our September number. *Transplant* Cabbages, Cauliflowers, Celery, Tomatoes, &c. Plant *Melon* seed for mango pickles—also, *Sweet Corn* for late roasting ears. Plant out slips or vines of the *Sweet Potato* without delay, and plant also *Snap Beans*, for a successional crop.

THE ORCHARD.

Wherever the spring frosts have killed the fruit, there will be a strong tendency to over-luxuriance in the growth of wood. This should be checked by cutting back or nipping off the young shoots of your trees, in order to produce stronger and more vigorous bearing wood, for next year. Destroy all injurious insects, and note carefully the bearing qualities and peculiarities of the different new varieties of fruit. Those who have plenty of fruit, the present season, are truly fortunate; and as it will be in brisk demand, at high prices, no trouble or care should be spared in gathering and sending to market in the best possible condition.

THE FLOWER GARDEN.

Roses, *Jasmines*, &c., should now be budded. *Annuals*, if desirable, may be transplanted, choosing favorable (moist) weather. Take up early *Bulbs*, as directed in our last number, and plant others to flower in Autumn. *Roses*, *Chrysanthemums*, &c., may be propagated by layers. *Dahlia*s will need staking and pruning, if over-luxuriant. Clip *Box* edging. Gather all desirable seeds, as they ripen, and put away in close paper bags, carefully labelling them. *Water* freely, both roots and foliage, and use liquid manure at intervals. Keep the earth mellow, and mulch all large herbaceous plants with woods-mould, leaves, or saw dust.

SOUTHERN FRUIT.—APPLES.

EDITORS SOUTHERN CULTIVATOR.—Having been frequently appealed to, both by the agricultural press and individual correspondents, for our opinion of those varieties of Apples, Pears and other fruits best adapted to the soils, climate and special localities in several of the Southern States, we embrace this method to answer these inquiries to the best of our knowledge and ability. To answer them satisfactorily is somewhat difficult, as success will be varied by climate, soil and locality; less probably by the former than by the latter; many kinds which may prove of excellent quality in a primitive region, similar to that of a portion of middle and northern Georgia may, perchance, lose their good character in the tertiary and secondary limestone regions of the sea coast and upper Georgia, Alabama, and Mississippi; whilst again with other varieties the reverse may be the result; in most instances it will be found that the quality of fruits is improved by a transfer from a primitive to a limestone region, such as that of the States above mentioned. We are prepared to yield the palm to both Alabama and Mississippi in the line of fine fruits, as their soil is, beyond question, more congenial to their full development than is our primitive formation; the same will apply with equal force to a portion of Tennessee and Kentucky.

Having paid most attention to the cultivation and examination of Apples and Pears, we shall confine this communication to that of Apples, reserving our opinion on Pears for another, if this proves acceptable to your readers.

The earliest ripening Apple we have, worthy of consideration, is the *Red June*, a true cosmopolite—one that is

*See notice of a new and valuable work on land Draining, under "Our Book Table" head, page 218.

at home every where—and as far as we have seen, succeeds every where, although not of any excellence to boast of, yet from its beautiful fiery colored coat and kind growth is worthy a place in every collection.

Next in season are a number we would not hesitate to recommend for almost every Southern region; such as the Julien, Nautehalee, Defiance, Toccoa, Bruce's Summer, all ripening in July and August; amongst these are some of the finest flavored and looking varieties to be found in the United States. We have heretofore described the Julien in your valuable paper, and will, therefore, not reiterate its good qualities. The Nautehalee is a new variety, brought to our notice by that enterprising and competent Pomologist, Dr. W. O. BALDWIN, of Montgomery, Ala. Its history, as received from him and our esteemed friend and Pomologist, Rev. J. L. MOULTRIE, of Union Springs, Ala., is, that it is an Indian Seedling, and was found on an old place which had once been occupied by them; it is described as being of fair size, of a golden yellow color, and of excellent flavor. Having originated so far to the South of us, this variety will, in all probability, prove well adapted to southern Alabama, and Mississippi. We have never had the pleasure of seeing a specimen of the fruit. The opinion of the two foregoing named gentlemen needs no endorsement to render it reliable, and we hesitate not to adopt it. The variety has hitherto been nameless, and at the solicitation of Dr. BALDWIN, we named it the Nautehalee, or Maiden's Bosom, by which name the Dr. calls it. The others are all supposed, and a portion known, to be natives of Habersham county. These we would recommend for cultivation to the primitive regions of this and other Southern States, and we know of no good reason why they will not be well adapted to the tertiary and secondary regions; we shall make drawings of these varieties this summer, and shall take pleasure in publishing them in our agricultural papers.

We could name others that possibly might bear off the palm in some sections of country, and do not wish to have our silence on their merits interpreted into their condemnation.

There are other varieties ripening in the month of June which bear a fine reputation; yet, having never seen them and having their character from rumor, we forbear to give our own opinion of them. We have in our nursery two varieties—one called the Striped June, the other the Franklin June—in this situation.

It hardly becomes necessary for us to say anything in relation to Autumn varieties, as when we get into those months it is so close on the heels of winter that all might come under one title. We shall, therefore, briefly allude to one or two varieties. The Disharoon is one of those, we think, heretofore described in the *Southern Cultivator*. It is of large size, with a flavor similar to that of the vaunted Newtown Pippin. We have kept them some years until July in good condition, but it usually becomes dry and mealy by the first of December.

The Chestalee, or White Apple, is another autumn variety that strongly recommends itself to the thrifty housewife for its excellent culinary properties, but is too acid for a good desert fruit. It is of large size, of very pale yellow or white color, as its name imports; the tree is vigorous, of a drooping habit, with slender wirey branches; produces largely and uniformly; the fruit is borne on the ends of the pendant twigs and not on spurs. To these we could add the names of a half a dozen others, equally as worthy of notice; but, should we do so, we fear, Messrs. Editors, your readers will suspect we are smuggling in our catalogue under the name of a communication; don't think it, however, as you shall have our advertisement for publication in a few weeks.

To dispose of our winter varieties with the same flippancy we have of the summer and autumn varieties would

be a pleasant recreation for us; but when we see such a host of blushing and ruddy faces as those presented by our favorites, the Nickajack, Walker's Yellow, Cullasaga, Red Warrior, Buff, McDowell's Sweet, Camak's Sweet, Horn, Rickman's Winter, Rabun, Wall, and Mead's Keeper, with a score of others, all presenting their fat sides and delicious fragrance for recommendation, it not only excites our senses of taste and smell in no small degree, but our wits are sadly puzzled in the choice. But here goes: As Walker's Yellow and Horn are natives of the black belt of Georgia, together with the Red Warrior and Carter's Winter, we shall not hesitate to place them in the front rank, to bear the heat of our Southern sun. Horn is a Seedling, raised by WILLIAM RUTHERFORD, Esq., of Cullodon, Monroe, co., Ga.; is of medium size; is said to be a fine keeping variety. Mr. R. informs us the tree is as hardy and vigorous as the Horse Apple, which is saying all that is needful.

The others we have mentioned are from various Southern States, and most of them we have tested, and can safely recommended them for extensive cultivation. The Nickajack, Wall, Berry and Summerour stand prominent by all who know them; we, therefore, give them our unqualified approbation.

As this article has partaken of rather a lengthy character, we shall close it by saying that our present prospects are very fair for a fruit crop. Our Apples will be abundant and fair, and we will not hesitate to put Georgia against any Northern State to exhibit fine specimens next fall.

Pears are rather few; Peaches, say a half crop, sufficient for eating and cooking purposes; none, however, for drinking. Wheat, thus far, is good. Other crops are so far behind as to be yet without character.

J. VAN BUREN.

Clarksville, Ga., May, 1855.

VINE CULTURE IN THE SOUTH—NATIVE WINE.

EDITORS SOUTHERN CULTIVATOR—The success in cultivating grapes and making wine in Ohio is so well known that the question often arises: "Can we not raise wine in Georgia?" Certainly we can, and good wine too. But we have committed the same error, as the first vine dressers in Ohio; we have in vain tried to raise grapes which were not suited to our climate. This evil is now remedied.

Suffer me to give you and your readers a short description of a small vineyard in my vicinity. As to the quality of the wine, I will leave it to yourselves to judge, from the accompanying sample.

Some 12 or 14 years ago, Capt. Dyson planted a vineyard of about half an acre on his plantation in Monroe co., Ga. About half of it was planted with the here called "Warrenton" grape, a variety whose origin and history has not yet been satisfactorily explained. At any rate, however, it is well adapted to our climate. The soil is a good loam, though not rich, and one corner of the vineyard, which is rather rocky, always produces the best flavored grapes. The vines are planted 10 feet apart each way, but had for many years been badly neglected, until A. LEARY, Esq., a few years ago bought the place. This gentleman, though not familiar with the culture of grapes, commenced pruning the stocks, and making wine. His success has been perfectly satisfactorily. For the last two years, the produce from about a quarter of an acre of this grape has been two hundred gallons annually. This year, the prospect is still more promising; though from the fact that the vineyard had been so much neglected, it is now almost impossible to dress the vines in a proper way. The stocks, however, look very healthy and are loaded with fruit.

The process of making the wine is very plain, and not differing from the method applied in Ohio: the ripe berries

are picked from the stems, washed up and allowed to stand for about 24 hours, after which the juice is drawn off, and the pumice pressed in a common cider press. The juice is very abundant, leaving but a small quantity of pumice, and after being filled into a cask, so as to leave space for fermentation, is left to itself for about 10 days, when the fermenting process is ceasing. Some sugar is then added, the cask filled up, and the bung closed tight. After some months, the wine is drawn off in another cask, where it is to remain until wanted.

The wine resembles the Madeira, high flavored and mild; and being the pure grape-juice, it is highly preferable to the *imported* Madeira and Sherry wines, always adulterated with brandy and other deleterious stuff. While such drugged wines are constantly sold at from \$3 to \$4 per gallon, Mr. LEARY has sold his pure wine at the very low price of \$1 50 per gallon.

Other grapes may, after a fair trial, be found valuable here, and I am now trying several kinds; but I am doubtful whether we will find a *better* or more profitable grape for this latitude than the "Warrenton."

Mr. LEARY deserves great credit for his perseverance and skill in producing this wine. He intends to enlarge his vineyard considerably, finding it by far the most profitable and the surest crop he possibly can raise, requiring, comparatively, but little labor.

I will leave it to all tillers of the soil to make their own cyphering, and they will see for themselves what difference of profits there is between wine and cotton. It is to be hoped that other persons would take this hint, and thus begin a new epoch in Southern fruit-culture.

ROBERT NELSON.

Macon, Ga., May, 1855.

REMARKS.—Accompanying the above communication, friend NELSON sent us a couple of bottles of Mr. LEARY'S wine. It is equal, if not superior to the best Madeira of commerce, both in body and aroma; though it leaves behind it none of the unpleasant effects of the adulterated wines we import at high prices from abroad. We are very thankful to Mr. NELSON for the foregoing clear and practical article, and hope it will not be lost upon our enterprising readers.—EDS.

FRUIT TREES, AND LOCUSTS.

EDITORS SOUTHERN CULTIVATOR—I notice that the locusts are plenty in several sections of the country; before they leave they will puncture all the tender branches of fruit trees and deposit their eggs; and my object in writing to you is to advise all those who find their trees injured by them to, at once, prune them off, even if they leave but a bare pole. Four years ago they injured my fruit trees very much, particularly the Pear, the Apple and Peach, and nearly ruined a thriving young orchard of Pears and Apples. I commenced the first year to cut off part of those branches that were most injured; the next year I did the same, cutting a little farther back; last year I cut them back still farther, and the present year, I am cutting off the whole of the limbs so punctured, even though some of them are as thick as my wrist, being satisfied, from observation, that my trees would be twice as large as they now are, had I pruned them clear back of every wound the first year. There is no doubt of these facts. I have paid very particular attention to the cultivation of fruits for the last fifteen years, and do not trouble the public unless I can say something that will be of benefit. The wounds made by the locust will be easily seen upon the lower side of the tender branches of old trees and upon all the branches of young trees.

Respectfully, &c., JNO. R. STANFORD.

Portona Hall, Habersham, Co., Ga., June, 1855.

FINE FRUITS AND THEIR CULTURE.

WHEN we consider the influence the cultivation of Fruit exercises on the health and morals of a country, as well as on the wealth and luxury of the people, it may be truly said that he who devotes his life to the contribution and advancement of such influences, confers as great a benefit upon them, and follows as honorable a calling, as the man who defends his country in time of war, or falls by the bullet, or the sword. A productive orchard or a fruit garden is not only a luxury and a source of enjoyment to the farmer or man of wealth, but is essential to the health, comfort, and well-being of individuals of every class. It affords an amusement or occupation to be coveted beyond all others, and leads to nothing but good—to nothing sensual or vicious. It can give rise to no bad habits; but on the contrary, will serve to protect a man from the allurements of dissipation and its consequent evils.

Our orchard and garden fruits have followed man from the earliest periods of civilization, and perhaps have been more studied, and consequently better known, than any other plants. There are two characteristics, however, concerning their cultivation, which are of great importance to cultivators. First, the liability of almost every sort to "sport" and produce varieties differing, in many cases, more from one another than they differ from other species. But let it be considered that when these varieties take place, they may not always tend to deteriorate the fruit, but may often result in an exchange of one good quality for another, or perhaps even exhibit an improvement in the qualities. For instance, we may, at least, expect to obtain early fruit from the seeds of that which is early, and from those of late fruit the reverse; and by parity of reason, from large or small, from sweet or sour, from juicy or dry fruit, we may also expect to obtain seedlings that will, in a greater or less degree, correspond to their origin—a result which it may often be an object for the prudent cultivator to secure. The second characteristic is, that nearly every class of fruit is remarkably subject to the attacks of insects and of disease; for trees, like animals, have inherent diseases, or a susceptibility to receive those peculiar to their species. Although insects are the direct source of many injuries to trees and their fruit, they are frequently met with in morbid parts, feculent or putrefying from previous malady, and may be regarded as the *effects* rather than the *causes* of disease; and accordingly should be treated in reference to these facts.

It may not be without interest to compare the valuation of orchard fruits cultivated in this country at different periods within the last fifteen years. In 1840, according to the census of that year, the value of orchard products was \$7,256,904, besides 121,734 gallons of domestic wine. The census of 1850 gives \$7,723,186 worth of orchard products, and 221,249 gallons of wine, showing only an increase of 466,282 in value of fruit, and 96,515 gallons in the production of wine; both of which are unquestionably too low. The amount of domestic wine made in the United States in 1853 may be safely estimated at 2,000,000 gallons; which, at \$1, would be worth \$2,000,000. Add to this \$18,000,000 worth of strawberries, blackberries, raspberries, cranberries, and orchard products, the value of fruit, cider, vinegar, and wine, of domestic growth and manufacture, would amount to \$20,000,000.—*Patent Office Report of 1853.*



CRATÆGUS PYRACANTHA, OR EVERGREEN THORN, FOR HEDGING.

OUR engraving represents, beautifully, the best plant for hedging, wherever it will endure the winter, which we suppose it will do as far north as Tennessee, or perhaps Kentucky. It is an evergreen, with foliage rich and dark, and very dense; as is also its habit of growth, which is horizontal to a much greater degree than is common even among Hawthorns: and at same time very rapid, in moderately good soil. It is, as may be seen, extremely thorny, and the thorns very hard and sharp. The cut represents leaves, thorns, &c., of the natural size. The wood is not too brittle, and will bear wattling almost like a willow, when necessary to close a gap, or strengthen a weak place, and no plant whatever, bears the shears better. In the spring it is covered with its very beautiful white blossoms, and all through the fall and winter, with a mass of bright scarlet berries. The seeds grow readily in the hands of the nurseryman, but the plant grows so surely and so freely from cuttings that they afford the surest and easiest mode of propagation. In four or five years, on fair soil and under good management, it forms a perfect fence.

This plant will possess one great advantage over the Cherokee Rose or the Osage Orange, that it may be readily trimmed by a machine, which no doubt will be perfected by some inventive genius; and which will operate after the manner of the mowing machine running astraddle of the hedge, upon a high wheel and a low one, clipping the hedge into the shape of the letter A.

REMARKS.—We copy the foregoing from the *Rural Almanac*, of our friend AFFLECK, to whom we are indebted for the excellent engraving above. As an evergreen, the *Crataegus* (or *Mespilus*) *Pyracantha* undoubtedly possesses some advantages over the Osage Orange, especially for ornamental hedges surrounding flower gardens, lawns, &c. As a plantation or orchard hedge, however, we still adhere to the Osage Orange, on account of its vigorous growth, formidable thorns, close-grain, toughness, and great tenacity of life—though we are favorably impressed with Mr. A.'s account of the *Pyracantha*, and disposed to give it a fair trial.—Eds.

FRUIT AND VEGETABLE CULTURE.

A CORRESPONDENT of the *Working Farmer* (H. C. V.) thus adviseth increased attention to the products of the garden and orchard:

But I wish to see farmers do more, and devote time, valuable time, and money—yes, *money*—freely, but wisely, to the production of fruits and vegetables. We do not consume enough of either, and there is no fear of overstocking the market with *good* articles. There are plenty and more than enough of a poor quality, engendering sickness, pestilential disease and death, among the moving multitude in our great cities. The demand has increased, and will continue to increase, in direct ratio with the supply; because the community are in want of cooling, refreshing fruits, and nourishing vegetables, in lieu of the mass of coarse vegetable and concentrated meat diets so freely indulged in for the want of something better. I am not in favor of a strict vegetable regimen, but do believe that the use of more fruits will tend to establish a better state of health, since it is admitted by the best physicians, that more solid food is eaten than is essential to supply the wants of the system. Prospects for the production of animal flesh at cheap cost are far distant, hence if a portion of this can be dispensed with, in favor of the cheaper and more healthful fruits and vegetables, the cost of living will be lessened, and we may hope the pleasure of existence enhanced.

JENNY LIND STRAWBERRY.—We find the following account of this new variety, in the April number of *Hovey's Magazine of Horticulture*:

This new variety now offered for sale, has been exhibited before the Massachusetts Horticultural Society for three years, and highly spoken of by the fruit committee. Its peculiar qualities are earliness, size and productiveness, in the former respect ripening at the same season as the Early Virginia, nearly twice as large, and extremely productive. It is also a solid berry, high colored and handsome shape. We have repeatedly examined Mr. Fay's bed when in full fruit, and have been surprised at the earliness and abundance of the crop. If it gives the same satisfaction under the care of other cultivators that it has under that of Mr. Fay, it will prove one of the most valuable acquisitions, and will entirely displace that old and, in our opinion, almost worthless variety, the Early Virginia.

A HORTICULTURAL NOVELTY.—The agricultural branch of the Patent Office has taken measures to get seeds of the Bun-ya-bun-ya, a tree of the fir tribe, growing in Australia. It flourishes in a region of not much greater area than 30 miles square. It bears a cone nearly 2 feet in diameter, filled with seeds the size of an olive, and of flavor more rich and delicate than that of the pine apple. It is so much esteemed by the natives as that they at times travel hundreds of miles to partake of it.—*Washington Star*.

AUGUST AND SEPTEMBER PEACHES—NOTE FROM DR. M. W. PHILIPS.

ALL Peach growers are well aware that there is an "aching void" in the supply of this delicious fruit, in many parts of the South, from about the 20th of August until the middle of October, when the fine variety originated by Dr. BALDWIN, of Ala., and other late kinds, begin to ripen. Wishing to obtain a succession of first-rate sorts to fill this interval, we earnestly call on our pomological readers for such information as they may have on the subject. The following, from our esteemed correspondent, Dr. PHILIPS, of Edwards' Depot, Miss., is to the point:

"As to Peaches ripening in August and September and, up to, say, the 15th of October, I think I can promise you for that season some good fruit. I will examine some that I have had my eye on for two years, this fall, add to my own, if they prove good, and will be pleased to aid you in getting any and all we have here. I have the finest collection of October Peaches I know of. During this summer, if you will keep me in mind of it, I will give you a list of varieties ripening in August, September and October."

"Some of these days I may drop you a line or so, on fruits; now, I am perplexed about a stand of cotton. There has not been rain enough for six weeks to bring up seed. Some of my neighbors have perfect stands; mine will not average three-quarters. My corn is good, considering there was no rain. I have 190 acres in corn. The half of which will do me, if a fair crop. I have 10 acres of Canada Yellow, and Adams' Early White, tasselling at about 2 feet."

THE ODOR OF FLOWERS.—The perfume or odor of flowers may be gathered, according to the *Scientific American*, in a very simple manner, and without apparatus. Gather the flowers with as little stalk as possible, and place them in a jar three parts full of olive or almond oil. After being in the oil twenty-four hours, put them into a coarse cloth, and squeeze the oil from them. This process, with fresh flowers, is to be repeated according to the strength of the perfume desired. The oil, being thus thoroughly perfumed with the volatile principle of the flowers, is to be mixed with an equal quantity of pure rectified spirits and shaken every day for a fortnight, when it may be poured off ready for use. As this is the season for sweet scented blossoms, this method may be practically tested and without any great trouble or expense. It would add additional interest to the cultivation of flowers.

THE RESCUE GRASS (CERATOCHLOA BREVIRISTATA.)

ACCORDING to promise, we give below two communications on this grass, and would now gladly adjourn the matter over until another season's trial furnishes us with more reliable tests of its true character. Desiring, however, to make the *Cultivator* the medium of all information of interest to the agricultural public, we shall continue to give the views of our *disinterested* subscribers and others upon this grass from time to time, until its merits are definitely and conclusively settled.

TEXAS OAT, *alias* RESCUE GRASS—EXPERIMENT WITH RYE

EDITORS SOUTHERN CULTIVATOR—On the 20th of April I cut my Rye the third time; it then being in bloom—yield, 16 lbs.; aggregate (3 cuttings) 31 1-4 lbs. This will close

my experiment for this season, and perhaps for ever. I left the Oat, or Rescue, still undisturbed, that it might fully develop itself and mature its seed. It is now nearly dead, without ever having been cut or grazed; and if, every sprig of any one row was cut, it would not weigh 5 lbs. I have abandoned it with the seed in despair.

I had intended to have preserved the latter and deposited them with you for gratuitous distribution to such persons as would have obligated themselves to repeat the experiment which I have made, and report the result for publication; but of the three rows which I sowed, 60 feet long, I do not think I could gather a gill of seed.

As seed will probably be cheap in this neighborhood, say \$1 per bushel, I will still furnish you with that quantity for distribution to any of your subscribers who will agree to renew my experiment and give the result to you for publication in your widely extended and valuable journal, as I do not wish to detract from its merit as compared with Barley or Rye. This much I will say, however, that in the absence of either of these grains it might be employed as a very good substitute, if grown on very rich soil.

ALGERNON.

THE OTHER SIDE.

B. V. IVERSON, Esq.—Sir—I sowed some of the seed of the *Ceratochloa Breviaristata*, obtained from you through Dr. GRAY, of Nashville, Tenn., on the last of October. It is now three feet high in some places, and headed out beautifully.

Some seeds have thrown out 12 to 15 branches and it is very heavy grained, and must yield heavily in that line, if this climate should mature it.

I should not be surprised if, it would yield 20 to 30 bushels to the acre. This quality shoots it far ahead of any other domesticated grass with which I am acquainted.

I invited Judge MARTIN, of Liberty, the other day to see it and chew it. We did so, and came to a "*nem. con.*" conclusion that it abounds in saccharine matter—say equal to maize.

I sowed the balance of my seed on the 15th of April. It is coming handsomely, by deep plowing, sowing and harrowing in the seed.

Where did it originate? Tell me all about it. I will give it publicity through the Tennessee newspapers.

Remaining, most respectfully,

TURNER VAUGHAN.

La Guardo, Tenn., May 10, 1855.

DYSPEPSIA, OVER-EATING, &c.

EDITORS SOUTHERN CULTIVATOR—Indigestion is the prevailing malady of civilized life. It occurs so frequently, is attended with so much suffering, and so serious are its consequences upon the health and happiness of mankind, that it has the strongest claims upon our sympathy, and deserves the serious attention of every intelligent human being.

Dyspepsia is sometimes the consequence of disease, located in different and remote parts of the body, over which the individual can have no control whatever. More frequently, however, it is the direct result of errors in cooking and eating, and other habits which are constantly warring against nature; and ought to be regarded only as "the natural penalty for the violation of a natural law." But it is exceedingly difficult to convince any one, especially one that is ailing and valetudinary, that his mode of living is a bad one; or that his habits have anything to do with his discomfort. He is ready to blame anything but his own conduct with being the cause of his suffering. And though often warned by various premonitions of ill health and approaching disease, he heeds them not. Sickness may check, but cannot change his

course. Nothing, indeed, will be likely to effect a lasting change in his conduct until death, or the dread of death is staring him in the face! And now it is too late. Alas!

"The life of all his blood
Is touched corruptibly,"

He falls to rise no more! He becomes the victim of Hypochondriasis. The prey of an overwhelming despondency. The picture of despair.

"And with a green and yellow melancholy he sits,
Like patience on a monument smiling at grief."

A sad picture truly. And there are many such. A little care, abstinence and self-denial might save many from a similar fate. But in general, people are more anxious to know what will cure the complaint than what will prevent it. The latter is not difficult, while the former is exceedingly so. And it is better, always, to avoid disease, if we can, than to be cured by the best medicine or the best physician in the world.

We cannot understand the nature of these disorders of the digestive apparatus which so frequently afflict our race, unless we know something of what healthy digestion is. Something of the *physiology of digestion*. But a mere glance at some of the more prominent circumstances connected with this subject is all that our present limits will allow.

The contact of food with the mucus surface of the stomach immediately causes a fluid to flow from it, like the outpouring of saliva from the presence of food in the mouth. This is called *gastric juice*, a secretion peculiar to the stomach, and is always *acid*. The food is dissolved by the chemical agency of the gastric juice, from without inwards until the whole mass is completely broken down and converted into a uniform pulp, of a semi-fluid consistence, called *chyme*; which is also acid. In this state it passes out of the stomach to be mixed with the bile, the pancreatic and other juices concerned in the formation of chyle. This is digestion. Now the gastric juice being the natural solvent of the food, it is evident that healthy digestion cannot take place without an adequate supply of the natural solvent, for without this, the food cannot be converted into chyme, and if there be no chyme, there can be no digestion, because the other secretions concerned in the process were designed to act on *chyme*, not on crude undissolved portions of food; hence the whole process is defeated at the outset, from a want of healthy gastric juice. A scanty secretion of the gastric juice may result from various causes. Thus, it is well known that long continued watchfulness, or excessive fatigue, or great mental excitement will prevent the feeling of hunger and destroy, for a time, the power of digestion. A scanty secretion of the gastric juice results also from indolent and sedentary habits; and from the habitual consumption of more food than the system requires. It often happens in the upper classes of society, that the secretion of the gastric juice is only relatively deficient. The stomach can digest food enough to nourish the body, but not enough to satisfy the pampered appetite. When the gastric juice has dissolved a certain quantity of food, it is saturated, and can dissolve no more. If, then, a man eats too much or too often, the gastric juice will be inadequate for the complete and easy digestion of the food without any fault fairly attributable to the stomach. The organ is simply overtaxed. Again, it is well known that an acid and an alkali cannot exist together in solution without mutual decomposition. When, therefore, a full meal is taken, which has been saturated with an alkali, the acid of the gastric juice is neutralized or so weakened that digestion is either prevented altogether, or rendered very difficult and imperfect. In all these, and many other ways, the healthy action of the gastric juice is continually interfered with, and indigestion is the result. The food is

being digested and passing out of the stomach in two or three hours, remains for a much longer time. By and bye, fermentation sets in; acids are formed; gasses are evolved. Sometimes the food undergoes common putrefactive changes. Distention and a distressing sense of uneasiness of the stomach come on, with severe headache—often with a feeling of chilliness—frequent eructations of sulphuretted hydrogen—belchings—as of rotten eggs! This is indigestion.

The great difficulty in the cure of dyspepsia arises from the impossibility of enforcing proper dietetic rules which are absolutely necessary, and without which it is vain to hope for success. Dr. WATSON has truly said: "We preach in vain upon these topics." Nevertheless, if you would avoid the complaint, or cure it, the *quantity of food taken at one time must be restricted within the limits of the powers of the stomach for complete and easy digestion*. This rule is *absolute*, and cannot be dispensed with. You must adopt it early, adhere to it with unflinching firmness and never allow yourself to violate it on any account whatever. Unless you do this, all else will be unavailing. You will never repent of eating too little. In the next place, you should interpose an interval of five or six hours between meals, in order that the stomach may have time to perform its work, and an hour or two to rest in, before another task is imposed upon it. A continual teasing of the stomach with bits of food is very injurious. Have your food well cooked, and let it be simple in its kind—avoid condiments and all high seasoning; and make your meals principally of one dish. Never allow your food to be poisoned with alkalis, cream of tartar, or any other drug. Of all the modern errors in cooking, this one of *drugging one's food*, is certainly the most nonsensical, but not the least injurious. The lavish use of alkalis is a fruitful source of dyspepsia at the present day. It is now no uncommon thing to see children affected with the complaint almost as soon as they are weaned and begin to eat bread. They usually eat as much as the stomach can manage, if the food were pure; but when it is saturated with an alkaline substance, by which the acid of the gastric juice is neutralized, it will evidently prove too much for the weakened powers of the stomach to master.

We were designed for active beings, and a life of indolence and sloth is the infraction of a natural law which is sure to bring a penalty of some kind or other. *Bodily fatigue* should be avoided; but moderate exercise, with agreeable occupation of the mind, promote digestion, improve the general health, and contribute greatly to the preservation of both the bodily and the mental powers. Drink plentifully of fresh air; bathe frequently in cold water and rub well with a coarse towel. Never wear flannel next the skin. Cultivate habits of cheerfulness; endeavor to make yourself as agreeable to yourself and others as possible, and do not torture yourself with the notion that "all the ills which flesh is heir to" have been bundled together and laid exclusively upon your shoulders. Look around and see if there be not others as bad or even worse off than yourself. Perhaps you can do something for them. It may be you can in some way relieve their sufferings to some extent, and, if so, greatly lessen your own miseries by doing good to others.

In general, dyspeptic people are always wanting to take medicine; and medicine they must, and will have, of some sort or other. They can never be persuaded that they can ever get well unless they are continually swallowing drugs. They are expecting, it would seem, to find some medicine that will cure them, and at the same time allow them to go on in the indulgence of those habits which have generated the disorder. But such medicine has not yet been discovered, and assuredly never will be. The best of the best are of little use in these disorders, and the strict observance of proper dietetic

regulations they are worse than useless. When the liver is torpid or the bowels sluggish, an occasional dose of some mild aperient will be useful. But I advise you to take no medicine at all, except with the advice of a good physician, to whom you should always apply for your medicine. This is the only safe, as it is the only rational course you can pursue with respect to medicine. It is not wise nor even safe to tamper with any medicine, of which you know nothing at all. You cannot say with certainty that "if it does no good it will do no harm;" and if you could, that, at the best, would certainly be very poor encouragement to swallow a nauseous drug. But this is a fatal mistake, whereon many a constitution has suffered shipwreck. *All medicine, to say the most of it, is only a necessary evil!* And all blind and ignorant meddling with medicine, is usually followed by serious mischief—often with irretrievable ruin.

Above all, have nothing to do with any of those monstrous quack humbugs, commonly called "Patent Medicines," no matter how many "wonderful cures" they have performed. *They will not cure you.* And you should not, therefore, feel interested in any way about them. The proprietors and venders of these vile preparations know nothing of your system, your constitution or your complaint; and if they did, they could not cure you in a thousand years, if you were to live so long, with all the abominable Panaceas, and the more horrible Pillgarlicks ever invented by the whole tribe. You acknowledge that you know nothing about them or their nasty preparations. What assurance have you, then, that you will not be injured if you tamper with them? Will you be so silly as to be caught in a trap which you know, or ought to know, has been adjusted with the utmost stretch of skill and precision for that express purpose? You profess to have an utter abhorrence for all medicine, and especially quack medicine; yet you are continually taking medicine; aye, and quack medicine, too! What palpable contradictions! What strange inconsistencies!

Omo.
Toccoola, Miss., May 1855.

VALUABLE RECIPES.

EDITORS SOUTHERN CULTIVATOR—I have some valuable recipes, and if you are not prepared with better, and think proper, you may insert them in your invaluable paper.

TO CURE THE SCOURS IN COLTS.—Keep the mare off of green pasture; take 3 eggs, half a pint of whiskey or other spirits, 2 oz. of brown sugar, half an oz. of Laudanum; mix well, and pour down the colt. I will insure a cure.

TO CURE THE SWELLING OR QUINSEY IN HOGS.—Cut the knot or kernel open at the jaw; fill the cut with salt, and let him go.

The above I have tried, and never knew or heard of them failing.

W. S.
Jasper, Tenn., May, 1855.

PLANTATION GATES—INFORMATION WANTED.

EDITORS SOUTHERN CULTIVATOR—Wishing to put some gates on my farm, I have been seeking for the best mode of making and hanging them; knowing that there is a good and a bad way of doing this, as well as other things. On referring to the March number (1854) of your paper, I find there the plan of one, given by "R. WARD," of South Carolina.

The construction of the gate is easily understood. But the hanging of it does not appear to me quite so plain, (perhaps from my want of familiarity with the subject,) that is, if the plate is a correct representation.

Mr. WARD says: "I always gutter the head post," &c., which I presumed meant cut partly into the post. But in

the plate the post seems to be cut all the way through. And I would suppose the gate was intended to swing both ways, but cannot reconcile the position of the hooks with this idea. If the gate is intended to open but one way, and the plate is correct, against what does it shut? And, being self-shutting, is it not liable to be injured by slamming? For it seems wonderful to me that such a gate could be slammed by negroes 20 to 40 times a day for 17 years, without being shattered all to pieces!

I also would beg to know the best mode of hanging a gate so as to swing both ways; and at the same time be self-shutting? and what is the best kind of hinge for the purpose? Are there any good objections to such mode of hanging gates?

Yours, &c.,
K.
Woodlands, Ga., June, 1855.

REMARKS—Will Mr. WARD or some other of our practical and experienced correspondents answer the above? Our bump of *constructiveness* (or mechanical ingenuity) is not well developed.—Eds.

SMUT IN WHEAT—EFFECTS OF BLUE STONE.

EDITORS SOUTHERN CULTIVATOR—I have been a close reader of your very valuable paper ever since I have been a citizen of the State, and expect to be so long as I can raise that dollar in exchange for the paper, and I have read or heard a good deal said about the smut; and my experience is that wheat that is sown the same year it is raised will always have more or less smut in it, unless it is soaked in blue stone. I am clearly of the opinion that it is the faulty grains that produce smut. There is now and then a head that is not well matured. Let that wheat remain until it is two years old and the immature, or faulty grains, so dry up that they will not germinate; but sow it the same year it is harvested and these faulty or immature seed will germinate, but are not well enough matured to produce its kind. It is true, there is something like a grain, but not filled out. I much prefer it to remain until it is two years old for seed than soaking in blue stone; for it is the blue stone that kills the germinating properties of the immature grain and is so severe as to kill all that is not well matured. It must have its proportionable effect on the well matured grain.

It is true, I am a young farmer and have had but few years experience; but I never have seen a good stand of wheat after the seed was soaked in blue stone. My object in writing this is to give a helping hand to my brother farmers, if possible, as I have been much assisted by you and your contributors.

Yours truly,
R. E. H.
Jacinto, Miss., May, 1855.

DOMESTIC LIFE.—What a charming picture of domestic love has Croly drawn in the following stanzas:

"Domestic love, not in proud palace halls
Is often seen thy beauty to abide;
Thy dwelling is in lowly cottage walls,
That in the thicket of the woodbines hide;
With hum of bees around, and from the spring
Shining along through banks with harebells dyed;
And many a bird to warble on the wing,
When morn her robe o'er heaven and earth doth fling.

O! love of loves!—to thy white hand is given
Of earthly happiness the golden key!
Thine are the joyous hours of winter's even,
When the babes cling round their father's knee;
And thine the voice that, on the midnight sea,
Melts the rude mariner with thoughts of home,
Peopling the gloom with all he longs to see.
Spirit! I've built a shrine; and thou hast come:
And on its altar closed—forever closed thy plume!"

FINE WOOL FROM ALABAMA.

EDITORS SOUTHERN CULTIVATOR—I send you a lock of very fine wool, which I received a few days since from Col. JOHN M. BURKE, of Wilcox co., Ala. He informs that he clipped it from his Cotswold Buck Lamb, nine months old, and will weigh 175 lbs. live weight. He writes me that he will shear at one year old 10 pounds of wool.

Col. BURKE raises fine stock for sale, as he informs me; and imports every year. He imported, 2 years ago, a buck that weighed 420 lbs., of the Cotswold stock.

Knowing as I do, that you are in favor of the improvement of fine stock, I send you this, that you may comment upon it if you think proper. Comply with the above request and oblige,

Yours respectfully, &c.,
W. A.

Sparta, Ga.

REMARKS.—The sample of wool received with the above was about 9 or 10 inches long, of tolerably fine texture, and strong fibre. The investigations of Dr. PETER A. BROWNE, Mr. COCKERILL, and many others, so conclusively prove the adaptation of our climate to the production of the *very finest* wool, that "further comment is unnecessary." When will our people learn wisdom enough to kill off all the worthless, sheep-eating curs that infest the country, and enter fairly upon the production of wool for exportation?—Eds.

SCUPPERNONG WINE—GUANO, &c.

EDITORS SOUTHERN CULTIVATOR—Though not a subscriber at present, but have been and expect again to be, I wish to be informed, through the columns of the *Cultivator*, how to make wine from the Scuppernong grape, with and, particularly, without brandy. Almost every person in this region has the vines, and but few, if any, know how to make the wine. Some few persons make pretty good stuff, but we have had no wine yet.

The way we use guano on corn is a half ounce to the hill on one side of the corn, but both sides grow admirably. It is ascertained to be most successful to put on cotton the first or second plowing, by running deep on one side and dropping it in the furrow to be covered on all occasions, immediately. Guano is beginning to learn even the farmers of old Robeson something about the "law and the profits." Respectfully yours, &c.,

M. L. M.

Queensdale, Robeson, co., N. C., 1855.

REMARKS.—Our correspondent will find a series of articles in our volumes of 1852-3-4 on the culture of the Scuppernong Grape and Wine making; but we believe that no method of making wine from pure Scuppernong juice (without brandy or other alcoholic admixture) has yet been discovered. The process, with brandy, may be found in our February number for 1854.—Eds.

THE PRESS.

Oh! ever in thy banner bright
Let truth and virtue blend—
Be ever—ever in the right—
Be ever labor's friend.

His strong and honest arm shall be

• Thy bulwark in distress;
God bless the land of liberty—
God save your country's Press!

THE SUMMER SONG.—We take the following beautiful and sensible hymn from an ancient writer, whose productions, probably some readers are not very familiar with:

"Thou makest, O Lord, the outgoing of the morning and evening to rejoice. Thou visitest the earth, and waterest it; thou greatly enrichest it with the river of God which is full of water; thou preparest them corn, when thou hast so provided for it. Thou waterest the ridges thereof abundantly; thou settlest the furrows thereof; thou makest it soft with showers; thou blessest the springing thereof. Thou crownest the year with goodness, and thy paths drop fatness. They drop upon the pastures of the wilderness; and the little hills rejoice on every side. The pastures are clothed with flocks; the valleys also are covered with corn; they shout for joy, they also sing."

Domestic Economy and Recipes.

RECEIPTS, &c.

ORANGE PUDDING.—Grate the yellow part of the rind, and squeeze the juice of two large oranges. Stir together to a cream, half-a-pound of butter, and half-a-pound of powdered white sugar, and a wine glass of mixed wine and brandy. Beat very light six eggs, and stir them gradually into the mixture. Put it into a buttered dish with a broad edge, round which lay a border of puff paste neatly notched. Bake it half an hour, and when cool grate white sugar over it.

You may add to the mixture a Naples biscuit, or two finger biscuits, grated.

LEMON PUDDING.—May be made precisely in the same manner as the above; substituting lemons for oranges.

QUINCE PUDDING.—Take six ripe quinces; pare them, and cut out all the blemishes. Then scrape them to a pulp, and mix the pulp with half a pint of cream, and half a pound of powdered sugar, stirring them together very hard. Beat the yolk of seven eggs, (omitting all the whites except two,) and stir them gradually into the mixture, also adding two wine glasses of rose water. Stir the whole together, and bake it in a buttered dish three quarters of an hour. Grate sugar over it when cold.

If you cannot obtain cream, you may substitute a quarter of a pound of fresh butter stirred with the sugar and quince.

A baked apple pudding may be made in the same manner.

BITE OF A RATTLESNAKE.—Half a wine glass of olive oil, taken inwardly, is said to be a certain cure for the bite of a rattlesnake and other poisonous reptiles. A little should also be applied to the wound. Another remedy is the following:—Take roots and branches of plantain and hoarhound, bruised in a mortar, and the juice expressed; of which give one large spoonful as soon as possible. In an hour, if necessary, give another spoonful. Apply to the wound a leaf of tobacco moistened in rum. This remedy was discovered by a negro, for which his freedom was purchased, and an annuity settled upon him by the general assembly of Carolina.

WATER MELON BUTTER.—Split the water melons open, with a spoon scrape out the pulp into a cullender, and strain the water into vessels; boil it down to syrup, then put in apples or peaches, like making apple butter or any kind of preserves. Or, the syrup may be boiled without fruit down to molasses, which will be found to be as fine as the best sugar-house molasses. The season for making this table sauce will soon be at hand, and those who wish to partake of it should be prepared for the event.—*Scientific American*.

Advertisements.

FERTILIZERS.

HITHERTO the Planters of the South have been dependent on the North for all the artificial fertilizers they have used. The New Orleans Bone Black Company recently established in this city, with facilities for the manufacture of manures second to none in the United States, are prepared to fill orders for the following FERTILIZERS at the same prices charged in Baltimore and New York:

GROUND BONES.—For fruit trees and grape vines these are particularly beneficial. Five hundred pounds applied to an acre of ordinary pine wood land, aided by good, deep plowing, will produce a crop of Cotton as large as any of the best bottom lands. It is ground both fine and coarse, and is put up in barrels. The coarse is 1½¢ per pound—the fine and sifted, 1¼¢ per pound. Its great durability in the soil renders it the cheapest manure in use.

PHOSPHATED GUANO.—This valuable fertilizer, composed of equal parts of Peruvian Guano and fine Bone Dust, is, in every respect, superior and far more lasting than Guano used by itself. It is an established fact that Guano lacks Phosphate of Lime, and, also, that one half of its fertilizing qualities are dissipated in the air, which is plainly to be perceived by the strong ammoniacal smell constantly emitted by it until its strength is gone.

Bone Dust is nothing more than Phosphate of Lime, and this, besides being a strong and valuable manure, fixes the Ammonia in the Guano and retains it until it is absorbed by the plants. A trial of this fertilizer will satisfy any one of its durability and superior efficacy to simple Guano. Three hundred pounds applied to the acre will show its effects for five years or more, by an annual increase of at least 10 percent in the crops. Put up in barrels of about 200 pounds each, at 2 cents per pound.

SUPER-PHOSPHATE OF LIME.—This highly concentrated manure is composed of Animal Matter, Sulphuric Acid, Bone Dust, Gypsum and Sulphate of Iron, each of which, by itself, is a powerful fertilizer.

Five hundred pounds, or about two barrels of this Super-Phosphate of Lime have been found to be fully equal, in beneficial effects, to thirty wagon loads of ordinary Stable Manure.

The convenience of this article consists in its small bulk and consequent ease of handling. It may be used before or after planting of the crop. A tablespoonful put in each hill of Corn or Cotton, has been known to increase the yield twenty per cent. Five hundred lbs. to an acre of common piney woods land having a clay subsoil, will enable it to yield as good a crop as any ordinary bottom land. A single hundred pound applied as a top-dressing to an acre of meadow land, will increase its products at least a ton of hay. To Horticulturists, it is invaluable, as it may be applied to Fruit Trees at any season of the year. More than two thousand bushels of Ruta Baga Turnips have been raised to the acre, by the application of 200 lbs. of this fertilizer. For Garden crops, it is all that is necessary for success.

The Super-Phosphate of Lime is put up in barrels containing about 200 pounds, and is sold at 2 cents per pound.

POUDRETTE.—Two large establishments in New York, turning out over fifty thousand barrels annually, are not able to supply the demand of the market gardeners in the vicinity of that city for this justly popular manure. It is composed of night soil, deodorized and made into a powder similar to Guano, and is put up in barrels at \$2.50 per barrel.

Orders by mail or otherwise, addressed to the subscriber, will receive prompt attention.

D. C. LOWDER,

37 Broadway street,

Land Plaster, Peruvian Guano and Land Lime may also be ordered at the above address. July—ff

IMPORTANT TO PLANTERS.

THE Richmond Factory (Richmond county, Ga.) continues to manufacture WOOLEN CLOTH, for Negro Clothing, at 12½ cents per yard—fining every material except the wool.

Those wishing to avail themselves of this opportunity to procure for their Negroes a superior article of Winter Clothing, have only to wash the wool clean in cold water, and send it to the factory, or to Messrs. SCRANTON, SEYMOUR & Co., in Augusta, with instructions as to the amount of Cloth they wish made—whether heavy or light. If the wool be dirty, half a cent per yard will be charged for washing it. Burrs are not objectionable, as a machine is provided for removing them.

Wool is also carded into Rolls, for those who make their Negro, or other Clothing at home.

The terms now offered are so reasonable as to warrant a continuance of the liberal patronage heretofore extended by the planting community.

The Wool should be sent as soon after shearing as convenient, with the name of the owner distinctly marked on the bag or bale, that all the patrons of the establishment may be accommodated in due time.

Wool sent by any of the Lines of Railroad, in Georgia, or South Carolina, or by steamboat on the River, directed to "Richmond Factory, care of SCRANTON, SEYMOUR & Co.," will meet due attention, and the Planter will always have his own wool manufactured into Cloth and returned to him.

The highest cash prices will be paid for WOOL.

WILLIAM SCHLEY, President R. Factory.

June 55—4t

SOUTHERN CULTIVATOR FOR 1853.

BOUND volumes of the CULTIVATOR for 1853 may now be obtained at this office. Price, \$1.50. Or we will send it by mail, post-paid, at \$1.50. Address WM. S. JONES, Augusta, Ga.

THE ILLUSTRATED HORTICULTURIST

WILL be published on or about the 1st day of July, an elegant illustrated monthly journal, containing 72 large royal octavo pages, devoted to the Rural Arts and the advancement of the Science of Horticulture in the United States.

The want of such a Magazine has long been experienced. The growing interest with which the rising generation view the science of Horticulture, renders such a journal as the *Illustrated Horticulturist* imperatively necessary to the progress of rural affairs; that it is destined to become the most popular Magazine of the kind in the world, no one can for a moment entertain a doubt. Its extreme elegance, large size, editorial ability, and that very important consideration, an astonishing low price, will command for it a widely extended circulation. No expense will be spared to make it worthy of the attention of the American people, and a work which, in a national point of view, will do credit to its projectors. Mr. J. Van Vranken, an Artist of acknowledged talent, has been engaged to superintend and execute the engravings; this important acquisition will secure the desideratum of unrivalled excellence in this department.

The country gentleman who has, or contemplates, constructing a home in the country for his household gods will find the *Illustrated Horticulturist* an invaluable companion both for practical purposes, and entertaining reading for the leisure hour. Its attractive appearance will ensure it a place, even in the parlor.

Nurserymen will find the *Illustrated Horticulturist* necessary to the advancement of their interests, as its columns will, monthly, contain all the latest information with regard to recent discovered fruits, flowers, etc., both in Europe and America.

Rural Architecture will be one of the principal features of the *Illustrated Horticulturist*; each number will contain from two to four engravings of Model Cottages, from designs by eminent and skillful Architects.

The *Illustrated Horticulturist* will also have space devoted to the tasteful art of Landscape Gardening. Engraved plans of Gardens in every style and adapted to the peculiarities of different orders of Architecture will accompany each number.

The *Illustrated Horticulturist* will be printed on the finest quality of pearl surfaced paper, manufactured expressly. It will be issued regularly the first of each month. The following gentlemen, eminent for their ability in the science of Horticulture, have been engaged to conduct the Editorial Department: H. P. KNIGHT, JAMES SNOWDEN, and M. FORCNE, French Correspondent.

TERMS, \$2.00 per annum, payable invariably in advance; a liberal discount to the Trade, Postmasters, and getters-up of Clubs.

Address

C. REAGLES & CO.,

Publishers *Illustrated Horticulturist*, 205 Broadway, New York.

Nurserymen will please forward their Catalogues.

July—1t*

TO THE PLANTERS OF THE SOUTH.

THE Belleville Manufacturing Company would call your attention to the different styles of GEORGIA PLAINS, which they are now manufacturing for the coming season, believing they are better adapted to the wants of the South than any negro cloths manufactured at any point north of the Potomac. They have been successfully supplying the orders of Planters in the interior and on the seaboard for a number of years, and have given satisfaction in every respect, so much so that none who have used them one season have failed to order them afterwards; and the name has been considered so fair a guaranty of their quality that in many cases the Northern Manufacturers have endeavored to imitate and pass off their fabrics as the genuine *Georgia Plains*. Having increased the capacity to produce these goods, we, therefore, desire to deal directly with the Planters, so they may get the genuine article for their negroes, which, for warmth and wear, will save them more than its cost in Doctor's Bills.

We are now making three styles, to wit:—The Heavy White Twills at 40 cents per yard; the Heavy White Plains, 32 cents per yard; the Brown A Plains, 21 cents per yard.

The goods delivered at the Agency in Augusta, Ga., and forwarded free of charge for forwarding, and to be settled for on receipt of the goods, by orders on any responsible Factor or Commission Merchant, payable on the 1st February next. All orders will be put up in quantities as directed, in a bale or bales, and can be shipped from Augusta to any point South or West at as low a rate of freight as from any point. Planters who have no regular Factor, can give a reference, either in Augusta, Charleston, Savannah, Mobile, Montgomery or New Orleans or in such place as they are known, and if satisfactory, the order will be entered at once and the goods put up and forwarded at as early a date thereafter as possible.

The highest market price will be given for WOOL, delivered in Augusta, in exchange for cloth. Address

GEORGE SCHLEY, Pres'dent,

or, S. H. OLIVER, Agent Belleville Factory,

Augusta, Ga.

July 55—4t

GREENE'S PURE WHITE WHEAT.

IHAVE a very superior kind of WHITE WHEAT that I will engage to those who may want to purchase for seed wheat of the next crop, to be delivered at the B. Grange depot in good, strong sacks, containing more than one bushel unless ordered, nor less than a half bushel. It is the name of the purchaser and place of delivery. It is one of the very earliest and whitest kind. Sow any time in May or June, and by the 20th of May. It has been exhibited at the Fair at New York and has obtained a premium in every instance. It is a new variety and many engagements for the next season.

No Delivery no pay.

P. H. GREENE

Augusta, Ga.

April 2—4t

PLANTATION FOR SALE.

I OFFER for sale, my PLANTATION, situated in Marengo county, Ala., nine miles south of Demopolis. The place is very productive in corn, cotton and small grain, and the soil being very rich in lime, I think it would produce clover admirably. I have just seeded 30 acres, on which there is a beautiful stand of young clover. The plantation is healthy, has an abundance of stock water in every field, and offers great advantages to any one wishing to raise stock of every kind. Belonging to and adjoining the plantation, is a large tract of heavily timbered pine land. There is, on the place, a horse-power Saw Mill, which will cut from 1200 to 1500 feet of lumber per day, which can be made to pay handsomely, as the demand for lumber greatly exceeds the supply.

My residence is 2½ miles from the plantation, healthy, convenient to churches and schools and in a thickly populated neighborhood. The dwelling contains 8 rooms; all necessary outbuildings; a very large and rich garden; plenty of good water; pasture and fire wood convenient. The whole contains 1650 acres—900 or 1,000 cleared, and under fence. As I am determined to move from this section, I will sell a great bargain to any one for cash, or negotiable paper, bearing 8 per cent. interest. I would like to sell stock of all kinds, corn, fodder, oats, &c., at the same time.

I made on the plantation, last year, seven bales of cotton to the hand, and corn to do the plantation, and the seasons were anything but propitious. The titles are clear and indisputable, and the whole may be bought at the extremely low price of Twelve Thousand Dollars.

My post office is Spring Hill, Marengo county, Ala., where letters, post-paid, will receive prompt attention. I will take great pleasure in showing the place to those wishing to purchase.

July - 4

JAMES R. JONES.

CHEROKEE!

A VALUABLE LOT OF LAND FOR SALE.

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this Lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tracts is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

* For terms, &c., apply to the subscriber, or to Col. J. W. M. BERRIEN, of Rome, Ga., who will take pleasure in pointing out the land.

September—17

D. REDMOND, Augusta, Ga.

PURE DEVON AND GRADE CALVES FOR SALE!



ONE very beautiful thorough-bred NORTH DEVON HEIFER CALF, 5 months old—sire, "Keokuk;" dam, "Lively Dame"—for pedigrees of which see September number (1853) *Southern Cultivator*.

Also, a number of grade or half blood heifer and bull CALVES, of 1854, various ages—all from good native cows, and sired by premium bull "Keokuk," purchased from the Messrs. WAINRIGHT by Judge WARREN. For particulars, &c., Address

May 55—17

D. REDMOND, Augusta, Ga.

WM. ALLSTON GOURDIN,

FACTOR AND COMMISSION MERCHANT,

CORNER East Bay-Street and North Commercial Wharf, Charleston, S. C., is prepared to make liberal advances on consignments of COTTON, CORN, SUGAR, FLOUR, GRAIN, HAY, &c.

Genuine Peruvian Guano Depot!

FARMERS' PLASTER, CHARCOAL, BONE DUST, MINERAL PHOSPHATE LIME, SUPER PHOSPHATE LIME, &c.

Always on hand.

Sept. '54 1y

FOR SALE!

A SEA Island Cotton Plantation, containing 900 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skidaway Island, in Chatham county, on a bold salt water river, the health of which is unquestionable, and the facility for manuring with marsh and mud is unsurpassable, the land lying three sides on the river. The place is situated 11 miles from Savannah. The lands of Skidaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters for stock raising. Price \$3,500. Terms accommodating.

Apply to

Isle of Hope, March 9, 1855.

S. F. DUPON, Savannah.

April—17

CARMICHAEL & BEAN,

DEALERS in HARDWARE, CUTLERY and AGRICULTURAL IMPLEMENTS, Augusta, Ga.

We are, also, Agents for the following articles:—SALAMANDER SAFES, made by Stearns & Marvin, New York; LITTLE GIANT CORN AND COB MILLS; Indian Rubber BELTING, PACKING and HOSE, made by Boston Belting Company; ATKINS' SELF RAKING REAPER; CIRCULAR SAWS, made by Ho & Co., and Welch & Grubb's HORSE POWERS; FAN MILLS, THRESHERS and SMU & C. MACHINES.

April 55—Cly

Augusta, Ga.

F. MCCREERY,

Charleston.

R. M. HOOKE,

Chattanooga.

MCCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market.

Feb 55—Cly

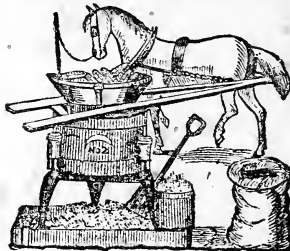
FANCY LOPE-EARED RABBITS.

A FEW pair of beautiful Lop-Eared MADAGASCAR RABBITS may be obtained by addressing the subscriber.

March 55—17

D. REDMOND, Augusta, Ga.

SCOTT'S LITTLE GIANT CORN AND COB CRUSHER.



THE attention of Planters and Stock-Feeders is respectfully called to this Mill, as the best and most profitable article now in use. In setting up, no mechanical work is required, it being only necessary to fasten it down to a floor or platform.

No. 2 will crush 10 bushels per hour with one horse, and it is sold for \$35, all complete, ready for attaching the horse.

No. 3, at \$65, grinds 15 bushels per hour; and No. 4, at \$75, grinds 20 bushels per hour with two horses.

CARMICHAEL & BEAN, Agents, Augusta, Ga.

Augusta, Ga., April 3, 1855.

I have been running one of Scott's Little Giant Corn and Cob Mills, No. 4, for the last five weeks, and it performs to my entire satisfaction. It was warranted to grind 20 bushels per hour, but I have ground over 55 bushels in an hour and a half, or equal to 23½ bushels per hour. In feeding 30 horses, I save at least 100 bushels of Corn per month, it now requiring only 200 bushels of Corn with the cob, where I formerly fed 800. I consider it decidedly the best kind of Crusher ever got up, and if I could not replace mine I would not sell it for \$500.

June 55—17

I. D. MATHEWS, Proprietor of the Augusta Omnibuses.

P. D. GATES,

COMMISSION MERCHANT,

AND Dealer in AGRICULTURAL IMPLEMENTS and MACHINERY, No. 12 Broadway, New York.

Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Powers and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines.

June 55—Cly*

DOMESTIC ANIMALS AT PRIVATE SALE.

L. G. MORRIS' Illustrated Catalogue, with prices attached, of a few Short Horned and Devon BULLS, and Bull CALVES; a few HORSES; South Down RAMS; Berkshire, Suffolk and Essex SWINE, will be forwarded (if desired) by addressing L. G. MORRIS, Fordham, Westchester county, N. Y., or A. J. BECAR, 187 Broadway, N. Y. It also contains portrait, pedigree and performance on the Turf of the celebrated horse, "Monarch," standing this season at the Herdsdale Farm.

June 55—17

FRUIT TREES.

THE subscriber having been engaged for some time in testing Fruits best adapted to the Southern soil and climate, now offers for sale about thirty varieties Northern, and same of Southern, APPLES. Also, PEAR TREES worked on Quince and Pear stocks. Biggareau and Heart CHERRY TREES upon Mahaleb stocks, which alone are found to succeed well here. These Trees have all been grafted and grown in this country, and will be found preferable to those from Northern Nurseries. Prices generally below those of the North.

Catalogues sent gratis on application. Best time for transplanting from November to February.

Clarksville, Ga., Oct., 1853.

J. VAN BUREN.

17

RANDALL'S COTTON PLANTER!

PALMYRA, Lee County, Ga., }
March 12th, 1855. }

To Cotton Planters.

WE DESIRE to call your attention to a Machine which we have invented and patented for the PLANTING OF COTTON. Its superiority over all others used for a similar purpose, consists in its great simplicity, requiring no more experience for its use than for an ordinary plow; the cheapness of construction, the great saving of time and labor in the planting of the crop, but more especially in the cultivation of it.

The certificates which we herewith present to you are from some of the most respectable and intelligent planters in our country, who have thoroughly tested our Machines, and sustain us in the above statement of the advantages it possesses. We are confident that when presented to the Cotton Planters throughout the Southern States, it will, in a short time, be universally used by them for planting their crops.

In bringing these Machines before the public, we have taken every precaution to free them from the liabilities of being associated with the mass of patented inventions, which do not stand a practical test, and we can assure all who will try them that they will fully equal our representations.

The Machines may be had of the following manufacturers:—
THOMAS J. CHEELY, Augusta, Ga.; BROWN, CLEMENS & Co., Columbus, Ga.; J. H. WATSON, Lee Co., Ga.

WM. W. CHEEVER, Esq., Albany, Ga., is our only Agent, who will contract for us with parties wishing to manufacture the Machines in any part of the United States.

CHARLES RANDALL,
LEONIDAS B. MERCER. }

RANDALL & MERCER.

Palmyra, Lee co., Ga., Aug. 10, 1854.

GENTS:—Having planted your entire crops with our Cotton Drill, please give us your candid opinion of the Machines, and particulars as to the advantages to be derived from their use, and oblige,

Yours respectfully, RANDALL & MERCER.

To Messrs. S. D. McLENDON, WM. H. OWENS, ROBT. LUNDY.

Palmyra, Lee co., Ga., Aug. 12, 1854.

GENTS:—Your favor of August 10th, came duly to hand. In giving you our opinion of your Drills, in their first place, we would say, we are pleased in every particular with their operation, and as to the advantages to be derived from their use—the first is the saving of at least one hundred and fifty bushels of Cotton Seed, in planting each hundred acres; second, a saving of labor in planting, of one horse and hand, planting from eight to nine acres per day, the Machine opening the furrow, dropping the seed and covering as it moves over the ground; third, a more perfect stand may be obtained with your Drill than by planting in the common way; fourth, a saving of at least one-third in the labor of chopping out; fifth, the seed being put in a line not one-half an inch in width, the chopping out can be deferred, until the season for rice is passed, without injury to the growth of the Cotton; and being in this narrow line with a sweep or narrow rooter, you can side so close as to cover up the first crop of grass in the Drill without injuring the stand of Cotton in the least. By this close sowing nearly all hoe work may be dispensed with, after chopping out. These we consider the principal advantages to be derived from the use of your Drills. On a retrospect of our last year's experience we have no hesitation in saying that any person with your Drills, can cultivate at least twenty five per cent more Cotton to each hand, with the same labor than can be cultivated in the common way of planting. We put that at a low figure so that no one can say they have been deceived by us. In the hope that these Machines may come into general use, we subscribe ourselves,

Yours very truly,

S. D. McLENDON,
WM. H. OWENS,
ROBT. LUNDY.

Albany, Dougherty co., Geo. Aug. 16th, 1854.

GENTS:—Yours of August 14th, with enclosed is before us. In reply we would state that we believe any person using your Cotton Seed Drill will realise every advantage Messrs. McLENDON, OWENS & LUNDY speak of; and we fully coincide with them in their high appreciation of your invention.

Yours respectfully,

J. H. WATSON, Lee co.
DAVIS PACE, Dougherty co.
WM. B. McLENDON, Randolph co.
B. B. DANIELS, Lee co.
Y. G. RUST, Dougherty co.
JAMES CHEEK, Lee co.
JEREMIAH HILLSMAN, Lee co.

To Messrs. RANDALL & MERCER.

Palmyra, Lee co., Aug. 10, 1854.

MESSRS. RANDALL & MERCER:—In reply to yours of the 5th inst. in regard to the operation of your Cotton Seed Drill, I am happy to say that after planting a portion of my crop in the old way, I was enabled to obtain one of your Drills, with which I finished. It is what we are longing for, and the beautiful work it performs has produced a uniform and abundant and different ways by intelligent planters, but with only partial success; yours leaves nothing to be desired; it puts the seed uniformly, and constantly on a line of one-half an inch in width, saves about one-half of the labor in planting, and one-third of the labor in cultivating. All must use it, and it is wanted and cultivated, and if not the labor

will be saved in other channels. Yours respectfully,
J. L. MERCER.

Aug. 10—5

GEORGIA RAILROAD.

PASSENGER TRAINS.

LEAVE Augusta, daily at 6 P. M. and (Sundays excepted) at 6 A. M.

Arrive at Augusta daily at 4.30 A. M. and (Sundays excepted) at 5 P. M.

Leave Atlanta daily at 6.30 P. M. and (Sundays excepted) at 4.30 A. M.

Arrive at Atlanta daily at 4 A. M. and (Sundays excepted) at 6 P. M.

CONNECTING WITH ATLANS BRANCH.
Arriving and leaving Union Point daily (Sundays excepted) at 11.30 A. M.

WITH WASHINGTON BRANCH.

Leaving Cumming daily (Sundays excepted) at 1.40 P. M.

Arriving at " " 9.30 P. M.

WITH SOUTH CAROLINA TRAINS.

Leaving Augusta daily at 6.30 A. M.

Arriving at Augusta daily at 4.00 P. M.

WITH ATLANTA AND LAGRANGE RAILROAD.

Leaving Atlanta, daily at 4.30 A. M.

Arriving at " " 6 P. M.

WITH WESTERN AND ATLANTIC RAILROAD.

Leaving Atlanta daily at 6.00 A. M.

Arriving at " " 6.00 P. M.

March 5—11 GEO. YONGE, General Superintendent.

EXTENSIVE COLLECTION OF SELECTED ROSES AND SOUTHERN RAISED FRUIT TREES.

AUGUSTA NURSERY.

F. A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camelia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE, Augusta, Ga.

Nov—11

RICH COTTON LANDS FOR SALE!

THE Subscriber offers for sale Forty Thousand Acres of the most productive COTTON LAND, in the Southern country, situated in the counties of Lee, Dougherty and Baker, in bodies of five hundred and two thousand Acres each, a part of which is partially improved.

For certainty of crops and durability these Lands are unequalled in the Southern States. Similar lands contiguous in cultivation, are yielding an average of seven bales Cotton, per hand, for a series of years, and eight on to twenty-five bushels Corn per acre.

Terms liberal. If desired, a credit of one to five years will be given.

Albany, Ga., March 15, 1855.

April—11

THE SOUTHERN NURSERIES,

WASHINGTON, ADAMS CO, MISS,

are now well stocked with all the varieties best adapted to the South, of FRUIT TREES and SHRUBS, VINES, STRAWBERRY PLANTS, &c.; and of ROSES and other ORNAMENTAL SHRUBS and TREES, EVERGREENS, &c., all of Southern growth, and of good size.

The packing is so carefully attended to, that Trees and Plants, Roses, cuttings for hedging, &c., are sent to all parts of the South, with scarcely a chance of their being injured.

Catalogues will be sent on application.

Nov—11

THOMAS AFFLECK.

AFFLECK'S

SOUTHERN RURAL ALMANAC,

A handsome little volume, full of useful and interesting hints on RURAL AFFAIRS IN THE SOUTH.

WILL BE ISSUED AS USUAL ABOUT THE FIRST OF NOVEMBER. Price 10 cents.

AFFLECK'S COTTON PLANTATION RECORD AND ACCOUNT BOOK—New Edition, now ready—No. 1, for forty hands or less, \$2 50. No. 2, for eighty hands or less, \$3 00. No. 3, for one hundred and twenty hands or less, \$3 50.

AFFLECK'S SUGAR PLANTATION RECORD AND ACCOUNT BOOKS—No. 1, for 50 hands or less, \$3 00. No. 2, for 120 hands or less, \$3 50.

These Books are now in general use amongst Planters. They will be sent by mail, prepaid and carefully enveloped at the above prices, and when five copies are ordered by clubs, and remitted for, an additional copy will be sent as commission to the individual making up the Club. Orders solicited from Booksellers and other dealers, to whom a liberal discount will be made.

B. M. NORMAN, Publisher,
14 Camp street, New Orleans.

Nov—11

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Ayrshire Heifers for Sale

AT \$100 EACH.

HEIFER, "PARAGON," one and a half years old, calved March, 1853; dam "Princess Mary," grand dam imported "Mary Queen of Scots" sire, imported bull "Robert Burns." "Princess Mary" gave 18 quarts per day, "Mary Queen of Scots" upwards of 30 quarts.

Heifer, "MARIE LOUISE," one and a half years old, calved March, 1853; dam "Maria Teresa," hy imported "Germantown," grand dam "Mary Queen of Scots," imported from Scotland; sire, imported bull "Robert Burns." "Maria Teresa" gave 20 quarts per day, "Mary Queen of Scots" gave 30 quarts.

Jan53—tf RICHARD PETERS, Atlanta, Ga.

SCOTT'S LIT E GIANT CORN AND COB MILL.

N^O. 3, warranted to grind 15 bushels per hour with one horse, price \$65 all complete, ready to attach the horse. No. 4, grinds 20 bushels per hour with two horses; price \$75.

April55—Cly CARMICHAEL & BEAN, Agents, Augusta, Ga.

1855!

1855!

SOUTHERN CULTIVATOR,

A MONTHLY JOURNAL,

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE

*Horticulture, Stock Breeding, Poultry, Bees, General Farm
Economy, &c., &c.*

Illustrated with Numerous Elegant Engravings.

ONE DOLLAR A YEAR IN ADVANCE.

DANIEL LEE, M. D., and D. REDMOND, Editors.

The Thirteenth Volume will commence in
January, 1855.

THE CULTIVATOR is a large octavo of Thirty-two pages, forming a volume of 384 pages in the year. It contains a much greater amount of reading matter than any Agricultural journal in the South—embracing, in addition to all the current agricultural topics of the day,

Valuable Original Contributions

from many of the most intelligent and practical Planters, Farmers, and Horticulturists in every section of the South and Southwest.

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It gives me pleasure to state that Mr. Davy has solicited Mr. S. Howard, of the *Boston Cultivator*, to collect pedigrees and illustrations in this country for the 3d volume, and has authorized Mr. H. to obtain information as to any and all mistakes which may have been made as to the Recording of American Animals in Davy's 2d volume, and such corrections will be made in the 3d volume. The plan proposed is that a copy of all the pedigrees and illustrations collected by Mr. H., as the Editor in America, shall be forwarded to Mr. Davy, and a copy of those collected by Mr. D. will be sent to Mr. Howard in this country. The whole matter will be published in America for our use, and in England for their use, by which means an American and English Devon Herd Book will be united, and the price reasonable, as the expense of English printing and duties will be saved. This concert of action has been brought about by Mr. Davy's good feeling and liberality towards this country, and I am only the instrument through which Mr. Davy acts, and from this time forth Mr. Howard will receive all communications on the subject, as will appear by reference to his advertisement.

All Editors who will give the above three insertions will receive a copy of the 1st, 2d and 3d volumes.

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July—tf

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SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

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NO. 8.

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DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

THE CRITICAL STUDY OF AGRICULTURE.

THE CULTIVATOR has many readers who desire to investigate, and understand, as far as practicable, the principles of agriculture as a scientific profession. To aid studious planters and others in mastering the theory of the most advanced tillage and husbandry, is a duty which we must not neglect, even if it subjects us to the charge of discussing themes not entirely plain to all the readers of this journal. While it deals pretty largely in mere recipes, or simple directions for pursuing farming operations of all kinds, it should not overlook the substratum of all sound practice, namely, the true principles of agriculture. These have their origin in the *nature of things*, as God has created them; and nothing short of the most carefully conducted researches to unfold the essential nature of things agricultural, can reveal the Laws which should govern the daily labors of the plantation. Rocks, soils, plants and animals, produce the multifarious and complex results which we witness, not by mere chance, but in obedience to natural laws enacted by an all-wise Law-Giver. A man of genuine science studies habitually the sublime teachings of nature, and thereby imbibes both knowledge and wisdom from the perennial fountain of all Wisdom.

The substance for which farmers now pay the largest price to increase their crops, is called *ammonia*, whose action in imparting fertility to poor land is a matter of deep interest, not less as a practical than a scientific question. KUHLMAN (see *Comptes Rendus*, 17, p. 1118-1130,) remarks as follows: "In order to understand fully the action of the salts of ammonia, it is necessary to point out the fact that they serve to facilitate the passage of other substances into the plant. Phosphate of lime, phosphate of magnesia, and silica, are somewhat soluble in water containing carbonate of ammonia, and thus become absorbable. Every soil contains carbonate of lime, which is rarely free from alkali, and this, under the influence of the sun's heat, decomposes the sal-ammoniac and sulphate of ammonia, whereby soluble lime salts and carbonate of ammonia are formed. Thus the ammonia salts are not only the chief means of supplying nitrogen to the plant,

but they also serve as a medium for facilitating the passage of those substances into the plant, which are indispensable to its development. No wonder then that they operate so favorably."

Before proceeding to analyze the above statements, it may not be amiss to remark that the market value of Peruvian Guano is regulated mainly by the amount of ammonia contained therein; and to say that, ammonia itself, is nothing more than two invisible gasses, nitrogen and hydrogen, chemically combined.

Kuhlman is not wholly correct in saying "every soil contains carbonate of lime which is rarely free from alkali," meaning potash and soda. It is true, the analysis of common limestone rarely fails to give traces of a small per centage of the alkalies named; but there are large areas of arable land, and particularly in the Southern Atlantic States, formed not from the *debris* of lime and other aqueous rocks, but from granite, and its kindred formations *in situ*. In such soils, lime, magnesia, potash and soda, exist mainly as silicates, not as carbonates, phosphates, or sulphates. Primarily these silicates in granitic deposits are insoluble in pure water, which is one cause of the comparative poverty of such lands. Water, charged with carbonic acid, or with carbonate of ammonia, as stated by Kuhlman, both of which we always treat as manure-water, renders lime, magnesia, potash and soda available, and also the flint or silicic acid with which they were combined. Silicic acid, (pure flint sand,) combines with ammonia in a way to form a soluble salt, which may easily be decomposed in the stems of wheat, corn and cane, leaving the flint to impart solidity and strength to the outer tissues of the plant, while the ammonia may partly escape into the atmosphere, and partly supply available nitrogen to the *pabulum* within, which demands this element for its organization and growth. The two most important working agencies in all manure, whether derived from the excrement of animals, or decaying vegetables consumed by them, are ammonia and carbonic acid. This acid and alkali united, make the common smelling salts sold in shops.

In 1852, BOUSSINGAULT determined with his accustomed care and accuracy, the quantity of carbonic acid in the air enclosed in a good soil, and found it, in some cases, to be four hundred times larger than in the atmosphere. This is a highly interesting and suggestive fact, to one familiar with the power of carbonated water to decompose all insoluble silicates, which really form the mass of tilled earth. So long as the soil has the proper physical properties, from perfect comminution and porousness, it is admirably adapted to collect and condense fertilizing gasses near the roots of needy plants. But no mere mechanical arrangement of particles will secure fruitfulness,

after phosphate of lime and magnesia, and after potash, soda, chlorine and sulphuric acid, have been removed in crops, or where they were primarily lacking in the soil. A good planter will not only concede this fact theoretically, but make it the basis of his system of rural economy. In his last and best work on "The Relations of Chemistry to Agriculture," LIEBIG has thus happily expressed the views which the writer has long inculcated on this subject:

"When it is considered that the sugar works in Waghaisel alone, send annually 600,000 lbs. of potash salts into commerce, which come from the fields of the best cultivators of Baden, without being replaced; when it is borne in mind that in North Germany every year an enormous quantity of potatoes are grown with help of guano, exclusively for the manufacture of spirits, and that besides the ingredients of the guano, none of the materials removed from these fields are restored to them, one cannot be in doubt as to the ultimate condition of such fields. The store of these other soil ingredients may be ever so large; it is *exhaustible*.

"I feel that to *know* is not to *be able*, and that to the actual establishment of a new science, only a new generation is adapted."

Baron Liebig knows that vast quantities of potash are annually consumed in growing sugar beets in Baden, and potatoes in North Germany; for his keen, chemical and physiological eye sees that not an atom of sugar in the beet, nor one of starch in the potato, can be formed without the aid of a present alkali in the tissues of the plant. But to know these pregnant facts, is "not to be able" to secure the restitution to the soil of this precious alkali, for the annual production of sugar and starch, in all coming time. Cell-labor, by which cotton seed and lint, wheat and corn, potatoes and beets are elaborated, is a department of agricultural physiology very little cultivated in any country. The agricultural philosopher indulges in the following suggestions: "The human being demeans himself in relation to mental food like a plant. As this must receive its food from nature not concentrated, but infinitely diluted with water, so is it with the human mind; an abstract truth acts only on the sense and feelings when it is presented to them sufficiently diluted, shown up in all its aspects, and covered with dress and finery."

In one form or another, "dress and finery" will, doubtless, always be more popular than dry, hard, abstract truths. These, however, gradually lose much of their uninviting sternness, as the popular mind becomes familiar with the prominent features and usefulness in the everyday duties of life. Farmers are not so unwilling to learn how plants gain in weight when growing, as some assert. The consumers of their great staples are more to blame for wasting the elements of crops in cities and villages, than the cultivators are for not finding out ways and means to supply the loss of potash, ammonia and bones taken out of their cultivated fields. All that eat bread and wear clothing have an equal interest in the agricultural resources of the community or nation to which they belong. The evil is not partial in its extent, but universal; and no speciality can meet all the requirements of the case. Greater mechanical skill in tillage may give temporarily larger crops, and pass among superficial observers for substantial progress and improvement. Such changes, however, have no natural or scientific basis; they only take a little more potash, bone dust and ammonia out of the surface of the ground in a given time—nothing more. The principles of universal husbandry reach to all consumers, and demand of them *restitution*. Once admit the doctrine that no one is under any moral obligation to feed the land that feeds him, and general desolation becomes the law of society. No cultivator can create an atom of

the raw material needed to form any crop whatever; and as crops cannot possibly grow without the precise things required by nature to build every part of the living structure, common sense fully sustains the teaching of science in reference to the wisdom and duty of husbanding the essential elements of human food and raiment. Instead of making great cities like London, Paris and New York, the recipient of the strength and the treasure of all fertile lands, and thereby blighting the earth with the curse of sterility, the owners of cultivated lands should compel the denizens of cities to pay tribute to their Mother Earth, and thus accumulate the wealth of society, not in overgrown towns, to corrupt the few and pauperize the many, but in millions of acres of a truly bountiful soil for the enduring benefit of all mankind. The surplus earnings of human industry, the wealth of the world, is no where so safe nor so useful as in improved lands, spread out over broad fields, like the blest rain and sunshine of Heaven. At present, commerce is only the half of an idea; and that idea is mercenary, not a philanthropic, or a scientific thought. Let genuine philanthropy or science direct commercial movements, and the soil, instead of losing so much and receiving little in return, will be made what Nature intended it should be, the ground store-house of boundless riches. This moral and economical view of agriculture, cuts off the possibility of a monopoly of wealth; it distributes capital over continents and islands co-extensively with the human family, and saves cities from becoming such pestilential sinks of pollution. And why should rot the farm and the garden, the orchard and the forest, be, in truth, as well as in theory, the favored objects of human ambition, rather than brick and mortar, wood and stone heaped up in cities, which a spark of fire may destroy, and leave nothing but dust and rubbish to the owner. It is the glory of agricultural science to teach man both how to diffuse wealth, and how to increase its productiveness, for the equal benefit of all. L.

[From the Transactions of the Agricultural Association of the Slaveholding States]

THE CLOVERS AND GRASSES OF THE SOUTH.

ADDRESS OF COL. ISAAC CROOM, OF ALABAMA.

THE Chronicles of the first half of the 19th century will present no great department of human industry, subject to greater reproach than that of Southern Agriculture. The vicious system has grown out of a seemingly unlimited extent of virgin soils, which nevertheless have been rapidly subdued and exhausted. Such a temptation may furnish some apology, but little justification, to the intelligent agriculturist, accessible as he is, to the precepts and examples of better systems of husbandry, and urged, as he is, both by interest and duty, to adopt them.

The purpose of our Association, laudable in the highest degree, is to arrest this downward course, to liberate our rural economy, if economy it may be called, from the reproachful imputations of the past, to awaken it to a new life and to provide that in future it shall, stimulated by the successful examples of others, move forward in the path which has been irradiated by science, and which leads to the good of private and public prosperity.

To accomplish this very important result, worthy of the highest efforts of us all, it becomes necessary to scrutinize the errors, the defects and the vices of existing modes, and to suggest and to commend to public favor the remedies, the improvements and the benefits of the new ones.

With this view, the responsible duty has devolved upon us of showing, so far as our humble ability will allow, how far it is practicable to remove what has been to the present time, a sore reproach to Southern Agriculture, by addressing the Association on Clovers and the Grasses adapted to the Southern or Planting States.

All must admit that a deficient supply of pasturage and of hay is the opprobrium of our agricultural management, nor is it less palpable that the remedy must be sought in the clovers and the grasses. These are not only required for a liberal supply of stock food, but also for any judicious rotation of crops, by which we can hope for the renovation of our depleted lands. The opinion which has long and extensively prevailed, that clovers and the artificial grasses are incompatible with a Southern climate, exerts a blighting influence on the industrial hopes of the South, and no labor can be more usefully bestowed than in showing its fallacy, none more grateful to the aspirations of the Southern planter.

The important question to be decided, then, is, whether the cultivation of clovers and the artificial grasses is practicable in a Southern climate? If this question shall be affirmatively established, observation and experience will indicate the most suitable varieties; and besides, it will assure to us a basis for future improvement and prosperity without limit or end.

And first we will speak of Clovers.

There are four species of these familiar to the country: The Buffalo or Native Clover; the White, the Yellow and the Red Clover. Reference will be made to a fifth variety, the *trifolium incarnatum*, or flesh colored Clover.

Of the two first species, viz.:—The Buffalo and the White Clover, from some observation, it is believed, that the want of a vigorous reproductive power in their roots connected with the fact, that they disappear with the first hot weather of spring or early summer, not to appear again for six months, greatly disparage the value of these plants, as a reliable resource for grazing or hay.

The Yellow Clover, if it be a Clover, being classed by some as a Lucerne, (*medicago maculata*;) has recently attracted a good deal of attention from its reported successful cultivation in Greene county, Alabama.

This plant has the important recommendation of affording a large amount of green food during the winter months, the period of greatest scarcity. It is doubtful, however, whether its coarse and watery herbage is very nutritious or inviting. One who has successfully grown and fully tested it, has told us that his cows would neglect it to feed on the first young leaves of the common brier. It also requires a fertility and an expense of preparation in the soil, which it is highly probable, with the addition of lime and gypsum, would insure the growth of more nutritious and valuable grasses. During the rigorous spells of winter, early sown rye and barley, red clover and the artificial grasses have their feeblest growth, and if, during these periods, Yellow Clover will furnish a liberal supply of succulent food, it has much to commend it to public favor.

The *trifolium incarnatum* or flesh colored Clover, is highly spoken of by European writers. It is cultivated extensively in France and Germany. This plant is said to grow equally well on light or stiff soil, and to be earlier and as prolific as the Red Clover and Lucerne. It is not known whether its culture has been introduced into the United States. Some years ago, Mr. Skinner, whose memory is dear to American Agriculture, promised the patrons of the *American Farmer* that he would take immediate steps to procure some seed from France, but we are not advised whether he did so, nor if he did, of the result of the experiment.

Of the Red Clover, there are two varieties:—The *trifolium purpureum mapis*, and the *T. pratense*. These have also been distinguished as Western and Southern Red Clover.

Miller, a writer of authority, says:—The stalks of the meadow trifolium, the little, early, Red Clover, are weaker, hairy, the stipule narrow and hairy, the heads of the flowers are rounder and not so hairy, as those of the large Red Clover, whose stalks are strong, almost smooth, fur-

rowed, and rise to twice the height of the other. The heads of the flowers of the *trifolium purpureum mapis*, are larger, more oval and more hairy than those of *trifolium pratense*, their petals open much wider, and their tubes are shorter.

The *trifolium p. mapis*, or larger, or Western Red Clover, is believed to be far the most valuable of the two species, and the characteristics are given to enable those who may enter upon the Clover culture, to distinguish between them. This is more important, as the smaller or Southern species has been generally cultivated at the South, which is indicated by the name.

The immeasurable value of Red Clover for a successful husbandry, has been so long and well established, both in Europe and America, as to command universal acquiescence.

Red Clover and Gypsum were both introduced into Pennsylvania about the year 1770. To the late venerable Judge Peters, of Philadelphia, eminent as a jurist and a patriot, and distinguished above all others of his day for his enterprise as an agriculturist, belongs the honor of having first cultivated Red Clover, and of having first used gypsum as a manure for it. The value of gypsum as a stimulating food for the grasses, had been accidentally discovered the year before in Germany, by a laborer who had been engaged in mixing stucco mortar. In passing to and fro, from his cottage to his work, through a sterile field, it was remarked, that the grass sprung up with a remarkable luxuriance along his path. This was supposed to be the effect of the gypsum which dropped from his clothes. An experiment was made with plaster of Paris, on a small plat of grass near his house, which confirmed the supposition.

Judge Peters having learned these interesting facts, procured a small quantity of the Clover seeds which had just been imported, and having purchased a bushel of plaster of Paris from a maker of stucco ornaments in Philadelphia, commenced his experiments. This was the beginning and the basis of Clover husbandry in the United States, which has since been productive of countless millions of wealth and comfort to the country, and the blessings of which must continue to expand and increase until we cease to be a civilized people.

Owing to our revolutionary war and the confusion which for some years followed its termination, the Clover culture did not get fairly under way, before 1785 to 1790, some 15 to 20 years after the first experiments were made. This is proved by a communication made in the year 1787, to the Philadelphia Society for promoting Agriculture, by James Vaux, a cotemporary and worthy associate of Judge Peters. Mr. Vaux says:—"Breaking up land is perfectly understood by all our farmers, I may say to an extreme degree, which ought to be counteracted by the art of laying down land with artificial grass seed, otherwise the arable land in the old counties of Pennsylvania will, in a few years, become of little value."

It is encouraging to the Southern Planter to reflect that but little more than half a century has elapsed, a short period in the life of a nation, since the older and now the most prosperous counties of Pennsylvania and the other middle States, were in the same exhausted condition of their arable lands, which we have now so much cause to deplore in the South.

Red Clover, lime and gypsum have been the chief agents by which the middle States have restored and increased the fertility of their lands and attained their present enviable and profitable husbandry. Other grasses and other manures are most advantageously combined with these, but their connection with every successful system is so universal as to render it doubtful, whether these agents or their equivalents, are not indispensable elements.

The question here recurs with increased interest, Are these available agents in a Southern climate? Can Red Clover, by the use of lime and plaster of Paris, be successfully grown here? As before remarked, not only doubts, but a belief to the contrary, have extensively prevailed. As it is vital to the welfare of Southern Agriculture, it will be pardonable to occupy more time than would otherwise be allowable in removing these doubts and dissipating this error.

We will now attempt to establish the affirmative of this all absorbing question, and we confidently believe that we shall make it appear beyond a rational doubt, that Red Clover will flourish at the South as well as at the North, by the use of carbonate and sulphate of lime and other proper means, in a soil naturally or artificially good, that this plant is not so much dependent in fact upon climate as upon a suitable soil and proper food.

We will appeal both to circumstantial and positive proof; that the cumulative evidence may be such as to leave not a doubt behind. However unphilosophical this mode of reasoning might appear in the advocacy of common truths, the position taken is so vital to Southern welfare that we feel we should be justified, would we pile Pelion upon Ossa in fortifying it.

And first the circumstantial proof.

Twenty-five years ago, the same erroneous opinion we are combating farther South, prevailed in Virginia, that Clover would not grow in the light, sandy, acid soils of the tide-water districts of that State. This error has long since been exploded, and by the use of marl and gypsum, Red Clover is now extensively and profitably grown there. The consequence has been an entire revolution in their agriculture, the credit of all which is due to the venerable Edmund Ruffin. And here we are forcibly reminded of the truth of the remark made by the sagacious Dean Swift, more than a century ago: "That he who makes two blades of grass grow, where but one grew before, deserves more of his country and better merits the gratitude of mankind than the whole race of politicians put together." Of the many noble sons of Virginia, none, after Washington, has proved a greater benefactor or more deserves a statue at her hands, than Edmund Ruffin.

He states, in his Essay on Calcareous Manures, that the increased value of lands in the tide-water district of Virginia, from 1828 to 1852, and comprising only one-twentieth part of the whole area, has been thirty millions of dollars, and when the whole shall have reached its available improvement, the increased value of these lands may reach five hundred millions, with proportional increase of other capital connected with farming. Here, as in Pennsylvania and other States, clover, lime and gypsum have been the great restoratives.

Coming farther south, it has, during the same period, been found both practicable and profitable, where the proper means have been used, to grow Clover on the alluvial soils of North Carolina similar in their texture and composition to those of Virginia, just described.

In Southern Italy, where the average temperature is not below that of our region, Clover is a favorite crop for alternating with rice.

It is known to have been the opinion of the late lamented Poinsett, that if the rice lands of South Carolina were sufficiently drained and protected from the influence of salt water, many of the artificial grasses would grow well on them, and enable the rice planter, not only to secure an abundant supply of the best hay, but to adopt a rotation of crops, as in Italy, by which his lands would be ameliorated and his crops of rice increased. So much for the circumstantial proof.

Next, we come to the proof positive.

In a letter written by John E. Calhoun, to the Editor of the *American Farmer*, and dated Pendleton, S. C., July,

1829, he says, the cultivation of Clover has been heretofore neglected from an impression that the heat of our sun was too intense and our soil too arid for its production. But the result of my little experience has, I think, clearly proved that it will not only flourish well, but that it is difficult, if not impossible to eradicate it.

He goes on to say, that as early as February, 1816, he sowed two acres in Clover. It was suffered the first year to remain unmolested and drop its seed. The following spring, the entire surface was covered with the most luxuriant crop of Clover he ever saw. At the proper time it was mowed, and all who saw it was astonished at its product. The Timothy sown with it was remarkably fine.

The high price of cotton at that period, caused the neglect of the Clover, and the land the next year was deeply plowed with a two horse plow for potatoes, preparatory to a cotton crop. The fifth, sixth and seventh years, this piece of land was cultivated in cotton, yielding each year not less than 1000 lbs. of green seed cotton per acre. The ninth year thoroughly plowed and manured for a premium crop of corn, and yielded some sixty bushels to the acre, and would probably have made one-fourth more, but for a severe drouth. The following year made a fine crop of rye. The next year rested—then, sown in oats in February, and, to his astonishment, a fine crop of Clover succeeded the oats.

Mr. Calhoun very justly remarks in the conclusion of his letter, "that he must be sceptical, indeed, who does not believe, in the face of such proof, that Red Clover can be successfully cultivated, at least, in the upper districts of South Carolina."

Another experiment equally convincing was made by Col. B. H. Saxon, in the Abbeville District of South Carolina, the details of which are given by Thomas Parker, in a letter to the same Editor and dated in April, 1831.

Col. Saxon sowed Clover in his plantation garden in 1823—first year permitted to remain and drop its seed—second year a luxuriant crop of Clover—third year in corn; the Clover appeared to be entirely destroyed. The fourth year wheat, and when it was cut, the Clover was thick on that part of the ground on which it was growing two years before. The fifth year it was allowed to remain and grow with such luxuriance, as to attract general attention. It was not cut, but was allowed to go to seed and the seed gathered. The sixth and seventh years in corn. The eighth year in corn—the ninth in cotton; and there is, he says, in the month of April after the cotton was planted, a great deal of Clover on the ground.

In the same letter, Mr. Parker refers to several successful attempts to cultivate Clover near the seaboard of South Carolina, which are recorded in the first volume of the *Southern Agriculturist*.

The late Thomas J. Summer, whose early death Science and Southern Agriculture have so much cause to mourn, also made an experiment with Red Clover in the highest degree conclusive and satisfactory. Prompted as well by an intuitive sagacity as by a benignant heart, young Summer, turning away from the allurements of a selfish and vulgar ambition, sought in Europe under the most eminent masters, such as Liebig, Burzelius and others, the means of accomplishing himself in Agricultural Science, that he might be qualified to aid and advance the leading interest of his State and nation. His able analysis of the cotton plant fully establishes his scientific attainments, while his experiment with Red Clover no less evinces a capacity and an aptitude for uniting Scientific with practical Agriculture, which, had his life been spared, would have made him an ornament and a blessing to his country. Asking pardon for the digression into which our feelings have seduced us, to pay a feeble tribute to one whose affections and talents were devoted to our great cause, return we now to the experiment before alluded to.

Mr. Summer's experiment was made on the clay land of Pomaria, in Newberry District. By the aid of Gypsum and cotton seed composted in the mule stables, bountifully applied, he cut from six acres of land in a single season, sixty-two thousand pounds of Clover and Crab Grass Hay, for which the South Carolina Institute awarded him the Society's medal. The cost of fertilizers, preparation of the soil, &c., &c., was \$72 for the six acres. It was seeded in barley and clover, and the portion of the barley left to mature yielded seventy-two and a half bushels. These six acres continue to be the most productive on the premises. For an expenditure of seventy-two dollars, which was more than reimbursed by the crop of barley, there was besides secured a crop of hay worth \$155 per acre and a permanent fertility of the previously improved land. A striking exemplification of the value of Science, and not less, of Red Clover.

Whether these successful and satisfactory experiments have been followed up, or whether Clover is at the present time grown to any extent, in the red land belt of this State or in any other portion of it, we are unable to say.

To come still farther South, we will take the liberty of saying, that we have been cultivating Clover for the last ten years in the cane break or lime land of Marengo county, Alabama, a few minutes north of 32 degrees, with every success which could be reasonably desired.

It has afforded an abundant supply of grazing for stock of every kind, fattening hogs, sheep, mares and colts, horses not at work, beef cattle, calves and goats, from March to November, and a good deal of grazing during the other months. Hay could be made if desired. It is grazed regularly from February to November, and irregularly at other times. During the period of regular grazing, stock of every kind will keep fat without any other food and nothing is given to them, except a little corn to the hogs to keep them gentle and obedient to the call of the herdsman. The land as yet has shown no disposition to Clover-sickness, nor was the crop ever much finer than during the past summer, although there was no rain on it from the 1st April to the 1st July, except, perhaps, one or two very slight showers. Although it cannot be doubted that moist summers are most favorable to its perfect development, yet when it has become well rooted in a deep rich subsoil, it is less affected by the influence of sun and air, than many other of our most valuable plants. It has often attained to the height of four feet.

We cannot give a better idea of its estimated value, than by stating that there are on the premises about one hundred acres in Clover; that the land would, with a favorable season, yield fifty bushels of Corn, or fifteen hundred pounds of Cotton to the acre, which it often has done, and that, notwithstanding it is believed to be more profitable in Clover pasture than in either of these crops, to say nothing of the saving in labor and the amelioration of the land. As proof, we will kill 30,000 pounds of pork, not inferior to the best Kentucky, which kept fat on it from February to first November, when they were taken off, not to fatten, but to make their flesh hard by a corn diet of six weeks before being killed. One-half of these hogs were December pigs, and will weigh 200 lbs. neat. There are now grazing on it seventy head of sheep, twenty head of mares and colts, and horses not worked; several beef cattle, which are all fat, and eat nothing but Clover, nor have they had any other food since February last. Besides, some 30 head of mules run on it for some two months after the crop was laid by, having been taken off to put to work about the first of September. One-half of this Clover was sown last winter, the remaining half is of some ten years standing. Of the old Clover, enough dried up in June, on the maturing of the first crop, to give a pretty fair cover to the surface, from the inability of the

stock to consume it. When at the premises, some ten days ago, we asked the overseer if he had not better remove the stock to an open field, from which the corn and cotton had recently been gathered, and his reply was, I see no necessity for it, as they are all fat and the Clover is gaining on them every day. Our own inspection afterwards, verified the truth of his statement.

We have often expressed the opinion, and still maintain it, that when Clover is successfully grown, it is a far more valuable crop at the South than at the North. The reasons are, that being a biennial plant, it requires renewing every third year. This renewing is often, if not always, necessary in a Northern climate; but never at the South, so far as our experience goes. The volunteer plants preserve a good stand. Again; during some six months of the year, the Northern soils are frozen up, or covered with snow, while at the South, during much the largest portion of this time Clover grows finely.

We know of other planters in the same county, who have engaged in the Clover culture, and who are pleased with their success and prospects.

More might be said in its behalf, and more proof adduced, but we believe that sufficient proof has been presented to show, not only the inappreciable value of Clover to Southern husbandry, but besides, its adaptation to a Southern climate, and that its growth, in truth, is not so much dependent on climate as on the mechanical and chemical characters of the soil.

We assume, then, that by the use of manures, lime and gypsum, Red Clover may be profitably grown on all stiff lands, or sandy lands lying upon clay sub-soils. Johnston says of the plant, even in Great Britain, that being a deep-rooted plant, it is found to grow best in a stiff soil. This is an ultimate fact—a habit of the plant, for which science can as yet give no reason, and which, so far as we know, no mechanical or chemical constitution of the soil can alter.

In the Southern States, there is a large quantity of sandy, acid lands, resting upon deep sub-soils of the same character. These cannot be recommended for the cultivation of Clover. If lime were supplied to these, so much might percolate through the porous soil, beyond the reach of the roots of the plant, as to leave it an insufficient supply of calcareous food; and gypsum applied to such soils disappears, when they are not calcareous, probably in the way suggested by Mr. Ruffin. The gypsum is decomposed by the strong attraction of humic acid abounding in such soils; the lime combines with it, forming humate of lime, and the sulphuric acid forms with the iron or alumen of the soil, sulphate of iron, or sulphate of alumina, both of which are noxious to growing plants.

We do not wish, however, to disparage these lands, for they are easily cultivated, and well adapted to some of our most valuable crops, and may be rapidly improved by the field pea, which has aptly been called "Southern Clover." The only objection to the name is, that it is calculated to foster the erroneous opinion, that the real "simon pure" will not succeed at the South.

To show that we have not exaggerated the merits of Clover, we will offer a quotation made by Johnston from Von Thaer, two of the very highest names known to agricultural learning. He says:

"When Clover was first introduced into Germany to fill up the year of naked fallow, in the triennial course of cropping, its effects appeared so extraordinary, that it was pronounced to be the limit of the art of culture. It gave fodder for cattle during the formerly naked year, it gave a better crop in the following year, and it was supposed to choke the weeds which infested the fields of grain."

We trust we shall be pardoned for having occupied so much time on the subject of this plant, in view of its importance in every prosperous system of husbandry in this

country and in Europe, its equal value in our own sunny land, and of the interesting reflection, too, that if equally available to Southern enterprise, it removes an incubus from our hopes, and fills the future with bright visions of unlimited improvement and prosperity.

Leaving the Clover proper, we come next to Lucerne, which belongs to the same family, being a trifol and resembling Clover in its general appearance, and likewise in the great depth of its roots, which are said often to descend as much as ten feet.

Lucerne (*Medicago Sativa*) is earlier in its growth than Red Clover; more rapid in its growth; is said to yield a larger amount of green food, which is more delicate and nutritious, and also to make a superior hay. It often grows to the height of three feet, furnishes four good cuttings, and makes four and five tons of hay to the acre.

Lucerne is a native of Spain and the South of Europe, and is the favorite grass of France, of Spain, Portugal, and Italy; of Rio Janeiro, Brazil and of Chili.

Its deep tap root enables it to bear the long drouths and hot sun of Southern climates.

The late Judge Buel says of this grass:—"From my own experience and the observation of others, who have cultivated it, I am satisfied that an acre of good Lucerne will feed six milk cows for five months, or from the 25th of May to the 25th of October, which allowing \$1 50 per month to each beast, would be \$45." This, at 7 per cent., would be the annual interest of \$642.

He says, further, "That it bears drouth better than any other grass, and remains longer in the ground, being a perennial plant."

Lucerne is chiefly used for green soiling, and is an exhauster; and the superiority of Red Clover to it, consists in the adaptation of the latter plant to the purposes of grazing and the improvement of land.

Both the history and character of this Grass point to it as suited to our Southern climate, and these indications have been verified by many successful experiments throughout the South and South West.

It has been grown as luxuriantly and yielded as large an amount of green food to the area, in Greene county, Ala., as it probably would have done in New York, under the same conditions of soil.

In treating next of the Grasses proper, it may be remarked, that although it is common to class Clovers with the Grasses, Johnston speaks of them as two classes of plants. He says, the two classes, indeed, are related to each other, both botanically and chemically, in the same way as Corn plants are to the leguminous, such as the Pea and the Bean. This classification is of some importance, as it indicates the proper soils and manures for each of the classes.

Of the artificial Grasses, those best known are the large and small Blue Grass, Orchard, Timothy, Herds, Bermuda and Guinea Grasses. The Musquit and Rescue Grasses—the former a Texan, and the latter a South American Grass—have been recently introduced, both of which promise to be valuable. The four first named, viz: Blue, Orchard, Herds, and Timothy Grasses, are cultivated extensively in the more elevated belts of the Southern States, and to some extent in the middle districts. In the more Southern and Eastern portions, also, experiments sufficient to test the practicability of their successful growth have already been made.

The Grasses are not deep-rooted like the Clovers, and cannot, therefore, bear so well the influence of a hot sun. But when sown on good soils with the necessary shade, they flourish in the central districts of the cotton-growing region, and will probably do so in the Southern portion of it. There are several large woodland lots of Blue Grass, of Herds Grass, and Orchard Grass, containing from ten to sixty acres each, in Marengo and Greene

counties, Ala., which have been well set and growing finely for years, and afford a large amount of pasturage.

It is more desirable that the Grasses should grow in the woods, for in this way they can be made productive without injury to the valuable timber. In Kentucky, the woodland is nearly as valuable for its rich crops of Blue Grass, as the arable land is for grain; and, we are informed, frequently rents for four and five dollars per acre for grazing, with a clause in the lease restraining damage to the timber. Our idea of a model estate requires every acre of woods to be in Blue and Orchard Grass, or Herds Grass.

The Musquit Grass has recently been introduced from Texas, and as it is a native of an almost tropical climate and has quite an extensive habitat in its native country, the most sanguine hopes are entertained that it will prove a valuable acquisition.

Mr. B. V. Iverson, of Columbus, Ga., has lately introduced a new species of Grass, which he calls Rescue Grass, and which is very appropriately named, if it be as valuable as he represents it.

He has had it classified by Dr. Torrey, of New York, who calls it *Ceratocloa Breviaristata*, or Short Awn Horn Grass, and says that it has the largest grain of any known grass; that it is a native of the Pacific Coast; that from its large grain it makes a very valuable hay; and further, that it must prove a valuable acquisition to the South.

Mr. Iverson says that it will keep stock fat during the winter and spring; that it is as nutritious as Barley, and stock are as fond of it, and concludes its praises by saying that, without reservation, it is the most valuable Grass ever introduced into this section, or which can be introduced. Without any design to impugn his statement or disparage this Grass, we will say, that if it should prove half as valuable as is represented, it will confer a blessing on the South, and most rapidly come into public use and esteem.

The Bermuda Grass is valuable for pastures, in many situations where other grasses and crops will not flourish, as in exhausted fields, on gullied hill-sides, and on river and creek bottoms, which are unfitted for cultivation by frequent overflows. The great objection to this grass is, the difficulty of eradicating it, when it spreads into the adjacent cultivated fields, which it is much disposed to do.

The Guinea Grass furnishes a large amount of green soiling, and also roots, which are a nutritious food for hogs, but it is liable to the same objection with the Bermuda Grass.

There are other foreign Grasses which may yet be imported, and upon a fair trial prove valuable to us, as they have done in Europe; such as the Italian Rye Grass, Meadow, Fescue, &c., &c., which are so much prized in England.

Besides the artificial Grasses, the South possesses treasures in her native grasses which she has not yet learned to appreciate. If proper attention were bestowed on these the value realized would astonish us. As an illustration, a gentleman of Autauga county, Ala., distinguished for his successful enterprise in another department of industry, told us, a few weeks ago, that 20 acres of creek bottom land, he had the present year saved 10 tons of sound, sweet Crab Grass hay, which would serve his purposes as well as the Northern hay, for which last he had to pay \$35 to \$40 per ton by the time it reached his stable door. His 20 acres of grass will, therefore, be worth to him \$1400 to \$1600, or \$70 to \$80 per acre, which is the interest on \$800 to \$1,000 per acre.

In conclusion, we will say, that while we lament our want of ability to do justice to this most important subject, we at the same time believe, that in view of all the facts and considerations which have been presented, in the words of Mr. Calhoun, previously quoted, "he must

be sceptical, indeed," who does not believe that Clovers and the artificial Grasses can be successfully grown in a Southern climate. This is the great pivot upon which our Agricultural fate turns. Settle this question in our favor, and the future becomes bright. It gives us a foothold upon which we can firmly stand, and challenge the world to a competition in the race of human prosperity.

Without a serious rival in the great markets of the world, in the three leading staples of Cotton, Tobacco and Rice, with \$2,000,000,000 of extra labor; with a country extending from the fortieth parallel of latitude nearly to the northern tropic, and embracing thirty degrees of longitude, with every variety of soil and climate, variegated with lofty mountains, fertile and wide spread valleys and rolling prairies, drained by navigable rivers unequalled in North America or Europe, with convenient and capacious harbors, with a sea at our door which must be the pathway of the world's commercial travel, with unlimited water power and inexhaustible supplies of Coal, Iron, Copper, Lead, Lime and other valuable minerals, as also of timber; and with a population religious, intelligent, enterprising, energetic, and ambitious of the highest civilization—with all those unrivalled gifts and privileges, yet lacks the South one thing, which is necessary to their full fruition. This is an improving Agriculture; a system of husbandry which shall properly unite pasture with tillage, which will secure a liberal supply fine stock, and a gradual amelioration of her arable lands. Without this, as an Agricultural people, declension, and not progress, must be our destiny. Give us but this, however, and in the future of our glorious country, the South may achieve all that fancy can depict, or fable invent.

PLOWING IN TIME OF DROUTH, ITS EFFECTS, &c.

EDITORS SOUTHERN CULTIVATOR—I see in the *Cultivator* for June a communication from "J." of Alabama, on the subject of stirring the earth in time of a drouth, in which he condemns the practice, and believes it to be injurious to the growing crop, particularly to corn. In your remarks on this subject you disagree with him (and I am of the opinion justly,) and invite the experience of all your practical and observing readers on this subject. I feel inclined to cast in my mite, and should you think it worth anything, let your readers have it. I shall undertake to give facts as they have occurred in my experience, without giving the why and wherefore, leaving that part for a writer of higher attainments than myself.

In the first place, I will say that "J." is the first person I have ever known to condemn the practice of stirring the earth in time of drouth, particularly while the crop is young. He speaks of "his corn being 4 or 5 inches high." I will say to "J." that instead of letting his plows lie idle at that stage of his crop, if he had had a first-rate set of coulters and put them to work in his corn, running them deep and close to the corn, notwithstanding the operation might have caused his corn to wilt and seem to be checked in its growth for a few days, it would have soon recovered the check and have been much benefited in less than ten days from the time of such plowing. I am fully of the opinion that deep plowing will raise more moisture to the roots of growing plants than will escape by stirring the surface. I have always found it to be an injury to a growing crop of corn to let it remain too long (say more than 20 days) before it received its regular course of plowing. By letting it alone much longer than the proper time, the roots become tough and by plowing them often many of them will pull or break off at their source; which gives the stalk a marked check in its growth, especially if the land be dry. It is always best, if the land be dry or if it has been over the proper time for plowing the corn, to go over the crop or a field, plowing one row and leaving one, then return to the begining and plow the row

first left; this enables the roots, in the first instance, to recover somewhat from being broke or disturbed before the roots on the opposite side have to undergo the same operation. I have always found in plowing land shortly after a good "season," that it would hold moisture much longer than the land that was plowed just before a rain, which would dry off, leaving a crust on the surface; and I much prefer to have my potatoe ridges thrown up after the rain has fallen, than to have it done before. The slips will live and grow off better; the same with cabbage and collard plants, &c., &c.

I will give a case which I consider to be to the point, and I am done. Some years ago, one of my neighbors and myself rented a large field in company; we divided the field as near as we could, as to quantity and quality; both of us planted about the same time; a drouth set in about the first of May; the land became very dry, so much so that my neighbor concluded it was labor thrown away to plow. I continued my operations, giving my corn its portion. In due time we had a good season, the last of June; my corn was then a good deal ahead of him, when the rain came, I had nothing to do, as soon as the land got in stirring order, but to brush over the crop with my harrows and lay by. He (my neighbor) had his to plow, and then wait some 10 or 15 days to run over with his harrows and lay by. The result was, I made about one-third more corn than he did.

Pardon me, Messrs. Editors, but let me say to you that I was glad to see your remarks, or the decision you had made on the subject of Rescue Grass. I was glad on account of my believing that there was too much humbuggery in the mess, and could say about as much for the Oregon Pea. The pea I have tried to some extent.

Yours very respectfully,

JOHN FARRAR.

Atlanta, Ga., June, 1855.

REMARKS.—Our friend mistakes us. We have made no "decision" on the merits of the Rescue. It remains for those who have tested it properly to do that. Thus far, the testimony is about equal on each side of the question. See Col. SUMMER'S "*Plea for a Humbug*," in another column.—EDS.

BLIND STAGGERS IN HORSES—A CURE.

EDITORS SOUTHERN CULTIVATOR—I notice in the June number of the *Cultivator* your request, relative to a remedy for the "Blind Stagers in Horses."

While I am aware it is expected of all correspondents of an agricultural paper to state facts and results known only to experience and personal observation, still, if you think this communication will justify a departure from the rule, you are at liberty to publish it. My information is derived from a trader in horses and his companion, whom I recently met on the public road.

One proposed selling me a very fine buggy horse, which led to my relation of the recent loss of several valuable horses with the "Blind Stagers." One of the gentlemen remarked, that, had he been present, he could have readily cured them. I replied, that I had used many and various remedies, as recommended, with a failure in every instance. He seeming to hesitate; I mentioned to him, if he would write out a remedy and publish it in the *Southern Cultivator*, I thought he would be entitled to a premium; whereupon, he approached a horse and began to feel on the side of the head, about equidistant between the eye and nostril, removing a large leader, in part, and then said to me, to feel a small hole "there"—I did so. He then remarked, that the stoppage or obstruction of the two holes on the side of the head, as pointed out, caused the "Blind Stagers," that he had never failed

to cure the disease, even after the horse had fallen, apparently to die, that he had cured a great many, &c., &c.

He then stated, that as soon as the horse took the disease a slit should be cut, about an inch long, immediately over each hole in the side of the head (I have recently inspected an old horse's skull and find the hole about three-eighths of an inch in diameter) and then run the forefinger in and tear the skin loose all around for an inch, then take a small spraying needle and run it up the hole for an inch or so, and let out the obstructing matter, which will be very offensive if the horse has been diseased for several days; then insert under the skin, round about, a small quantity of some strong sented herb (I think he mentioned "Tansey and Rue," though as to the herb he did not seem very particular,) well heated with an equal portion of common salt; this done, the horse will be well in a few days.

His companion attested the certainty and efficacy of the remedy. I will only add, that should any one think proper to try the prescription, and it should prove effectual, I trust he will report thereon.

My experience confirms the prevailing opinion, that the disease called "Blind Staggers" is produced by eating "immature" or "late new ground corn." W. J. A.
Haygood County, Tenn., June, 1855.

"PLOWING IN DROUTH PHILOSOPHICALLY CONSIDERED."

EDITORS SOUTHERN CULTIVATOR.—In the June number of your paper is an article with the above caption, and as you invite your "practical and observing readers" to give their opinion on this important subject, you have here the opinion of one who is not a practical tiller of the soil, and who professes to know no more of the matter than can be learned by observation and reflection. The present season has no doubt caused many to philosophize on this subject, and among others the writer, who has arrived at a very different conclusion from your correspondent "J." This conclusion is, that in a dry season, the surface of the ground (say one and-a-half inches,) should be thoroughly pulverized, but that deep plowing is injurious.

The pulverizing of the surface answers the purpose of mulching, and prevents the moisture of the soil below from evaporating; while deep plowing is injurious, because it breaks the roots of the crop, and causes the moisture of the soil, in which the plant gets its nourishment, to evaporate. Though there seems to be an inconsistency in this, it is only an apparent inconsistency, which vanishes when we reflect upon the manner in which the moisture is abstracted from the ground. The evaporation takes place at the surface, and the moisture from below is brought to the surface by capillary attraction. Now think of the degree of porosity at which this attraction will go on and the matter is plain. This hint will be sufficient for those acquainted with the laws of natural philosophy, "J's" crust, which he seems to value as a retainer of moisture, I consider to be just the reverse, unless it covers a layer of *very porous* dry soil, or is impervious to water. Another objection to the crust is that it prevents the air from circulating under the ground, as well as it would if it were broken.

But to express the idea without philosophical terms, one may easily test the matter by a simple experiment. Fill three boxes six inches deep with earth, and pour over them equal quantities of water, enough to wet the earth thoroughly. Then pack the earth in one box, leave two undisturbed (they will be in the condition of plowed land after a good rain, while the first will be in the condition of unplowed land). As soon as the crust forms and becomes dry, break it to the depth of one and one-half inches on one of the two and leave it on

the other. If my theory is right, the packed box will dry first, the one with the crust pulverized, last. If we add a fourth box, and stir it from the bottom occasionally, it would show the effects of deep plowing. The boxes, of course, should be exposed day and night.

P.

STANFORD'S WILDGRASS—EGYPTIAN MILLET—TROY AND CHILI WHEAT, &C.

EDITORS SOUTHERN CULTIVATOR.—I am requested to give you a statement of the growth of about an ounce of Wild Grass seed I received from my friend Major Jno. R. Stanford, of Clarksville, Ga. I drilled it about eighteen inches apart in the rows; it came up and grew finely. I sowed it in October; it grew finely through the winter; in the spring it headed about four feet high. I gathered about one peck of seed and sent it to my plantation. The same bed I first planted grew finely through the winter. I have cut it for my milch cows; it is now about three feet high and headed; I planted a sandy land, not rich; I live in latitude thirty-three and a half north; I have no doubt but that it is a valuable grass.

I have planted the Egyptian Millet several years, and find it better than anything for feeding green; planted in rich land, about three feet between the rows, and about two feet in the rows, four or five grains in a place; what you want for seed must be put in hills, four feet apart, and not more than about two grains in a hill; they will be certain to ripen and in great quantity. Horses, mules, or cows will keep fat on this Millet, cut and given to them without any other food. Two or three acres is enough for forty head of mules or horses. You may cut after it is three feet high and you increase the quantity every time you cut it, and before you are over, it will be as high the next time. I plant Doura Corn for my hogs with the same success. I have sowed Wheat from Troy, in Asia Minor; I am greatly pleased with it; this is the second year, from an ounce of Wheat sent me from the Patent Office. I sow in rows, two feet apart, and work it over once in the spring, just before it leaves the ground. I planted one half-bushel this year; I have a small quantity from Chili, in South America; I planted one half-pint; I have no doubt of getting a bushel of Wheat. You may place this in the *Southern Cultivator* if you think proper. I am greatly benefited by taking it myself and furnishing my overseer with it.

Your Old Friend,

ELISHA STRONG.

Aberdeen, May, 1855.

CURE FOR BLIND STAGGERS IN THE HORSE.

EDITORS SOUTHERN CULTIVATOR.—This fatal disease is, in the West, attributed to feeding on corn of the first year's ground, chargeable, perhaps, to the want of maturity, in consequence of late planting and bad culture.

My experiment, with the facts in the case, is this. A Missourian trader, who had from necessity fed new ground corn, had two horses attacked. One, which was taken some six or eight hours in advance of the other, died; the survivor, then hopeless to all appearance, was experimented on by request of the owner as follows: an incision was made in the face, of six or eight inches to the bone; a large gimblet was then bored in it, ranging between the eyes to the hollow; spirits of turpentine was freely rubbed into the cut, around the roots of the ears and throat; next a drench containing two grains strychnine and an enema of castor oil containing six to ten drops croton oil was administered. An hour elapsed and the horse yet lived, though crazy; another drench and enema was given, and six or eight hours after though "dead on foot" he was composed, accepted the first food for about fifty hours, and gradually though slowly recovered.

Mount Lebanon, La., May, 1855.

FARMER.

HORIZONTAL TILLAGE AND GUARD-DRAINS, OR HILL-SIDE DITCHES.

[Concluded from our July number, page 211.]

The guard drains or side-hill ditches should be first laid off; and afterwards the horizontal rows.

If the land is worn, and already much cut up with washes, the difficulty of determining the position of the ditches, and the labor of making them are infinitely greater than when the work is done the second year after clearing.

The outlet of the intended ditch should, as a general thing, be the place of beginning; its locality must be determined by the facilities for letting off the accumulated waters with the least injury to the land—some deep hollow or large gully which has got beyond the possibility of being filled up; or some, sharp ridge, or long slope covered with cane or Bermuda grass. It is seldom possible to select any location where more or less damage will not be done; but how much better it is that such damage should be at some point of one's own selecting, than that it should be distributed over the fields at a hundred points? It is frequently possible to empty a number of hill-side ditches down some sharp ridge, along which a shallow drain is made as a conductor, and which being directed, at the foot, into the bed of some bayou will ultimately fill it up, at the same time cutting down the sharp ridge, so that it may be plowed over.

The fall to be given varies with the nature of the ground. The more crooked the ditch, the greater the fall. A tolerably straight one or where the turns are long and sweeping, will not require more than an inch and a half in ten feet. One which winds along a series of ridges, the turns being short and frequent, must have two inches in ten feet. The fall must not be increased on account of the length of the ditch, but its width must be greater.

When at all available, let no ditch exceed two hundred yards in length. Better begin in the middle of the field, and let the water run both ways. Wherever a deep gully occurs, let the ditch fall from it each way when practicable; the difficulties of carrying it across such a place and rendering it secure, are thus greatly lessened. If the water must run in one direction, more than two hundred yards, the width of the ditch, and, of course, its capacity, must be gradually increased. The greater depth of water gives greater fall, and in consequence greater rapidity of current and liability to wash. Hence it is better to increase the width than the depth of the ditch, with increased length.

According to our opinion, the horizontal distance from ditch to ditch, to insure almost entire exemption from washing, is about forty yards. The course we should advise is, to run a ditch just above where the first washes begin to form; going over as much of the plantation as possible, in this way, one season. Then, notice, where washes begin to form below, and there run another series the next season. At the foot of the hill another ditch should always be made to protect the bottoms, which are valuable to the hill planter, though that value is very greatly lessened without such protection. When flooded by the water falling on the hills, it becomes completely saturated and the crop destroyed or seriously injured. The guard drain prevents this, by catching the water and carrying it into the creek or bayou.

Having fixed upon the location of the hill-side ditch and upon its outlet, let an assistant, generally an intelligent negro, take the "sight-staff," and, after raising the sight board to the height of, say, six feet, rest the lower end upon the ground at the point selected for the outlet. Then place your level in such position, as that you take in, at a glance, when sighting over the field of the instrument, the entire line of the intended ditch; whilst, at the same time, you sight at the black line of the sight-

board. There you remain, your assistant, before he removes the staff, sliding the sight-board down to the six inch mark upon the staff. He then steps forward in the direction indicated by your hand, ten steps of about a yard each, there raises the staff to the perpendicular; placing it up or down hill, as you may indicate, until the sight-board is again in the range of your vision over the table of the level; where the staff stood he sticks down a twig or makes a chop with a hoe. And thus he goes on as far as you can clearly distinguish the sight on the staff. When you can no longer do so distinctly, from distance or position, move your level, let your assistant raise the sight-board on the staff, and go on as before.

The ditch being marked out, take a steady running two-horse plow, and throw a heavy furrow down hill, the entire length of the ditch. This done, return to the place of beginning, tearing up the bottom of the furrow just made, and throw another furrow down hill until the site of the ditch is broken up deeply, to the width of four furrows. The hoe-hands then follow and draw out the loose earth, so as to form a continuous, neat bank all along the lower side. As a bank rather than a ditch is the object aimed at, make the latter no deeper than is necessary to form a substantial bank.

The work being done it is only necessary to add, that the ditch must be kept as clear of grass, &c., as a row of cotton. Cotton or corn may be grown on the lower part of the bank, but cultivated solely with the hoe. At least once a year, a shallow furrow or two may be cast along the bottom of the ditch, drawing the loose earth out, at same time, with the hoe. Breaks must be guarded against; which is easily done by, holding the driver responsible, the planter or overseer keeping a look-out at the same time.—*Affleck's Rural Almanac.*

ICE HOUSES FOR PLANTERS.

The following from the *Louisville Journal*, will probably furnish a satisfactory answer to "A Subscriber," of Jefferson County, Ga., whose inquiry appeared in our July No., page 210:

GENTLEMEN: I have an ice-house built above ground upon the following plan. I find it will not keep ice, and would be glad if you or some one of the readers of our *Journal* would inform me in what mine is lacking that prevents it from answering the purpose:

My house is about 15 feet square, 8 or 9 feet high; two frames 13 inches apart, and filled in with charcoal, well pounded in. I put about 11 inches of saw-dust in the bottom, some wheat straw on that, filled it with ice, and covered over with straw and saw-dust. I also have an upper floor covered over with charcoal, 9 or 10 inches deep, and a trap-door cut in the floor for putting the ice in and getting it out.

Could I get information so as to enable me to make mine answer the purpose, it would oblige yours, respectfully,

Lafayette, Ky.

So far as our correspondent has described the plan of his house, we can see no cause for the loss of his ice, but suspect the difficulty is either in the want of thorough drainage, or that the air is not entirely excluded at the bottom. The air in contact with the ice in the house becomes condensed and will escape through any opening at the bottom, and its place will constantly be supplied with the lighter warm air from without, and thus the ice will be liable to rapid waste. Ice well packed in a house properly constructed melts on the surface of the mass only; therefore the larger the mass of ice is the less will be the proportion of waste, and for the same reason a cube is the most perfect form in which ice can be packed to prevent

waste, and a cube of less than ten feet will not keep through the summer. If an ice house is built upon a sandy, porous soil, no special care is required to secure drainage, but if the soil is of a texture that will retain moisture, it is thus rendered a good conductor, and the ice in contact with it will melt rapidly.

We had occasion some years ago to make some inquiries on the subject of ice houses of Mr. N. J. Wythe, of Cambridge, Mass., who planned many of the extensive commercial ice houses near Boston. Mr. W. constructs his ice houses all above ground, with double walls or frames, as described by our correspondent, except that the space between the two walls is $2\frac{1}{2}$ feet at the bottom and 2 feet at the top; the spaces are filled with tan or sawdust, but charcoal is better, and a thickness of 13 inches we should suppose sufficient to keep ice well. Mr. Wythe sets the posts which are to form the double walls or frames of his house in the ground.

The bottom of the house, he says, should be filled about a foot deep with blocks of wood; these are leveled and covered with wood shavings, on to which a strong plank floor is laid to receive the ice. Upon the beams above the ice a tight floor is laid and covered several inches deep with dry tan or saw dust. The roof of the house should have a considerable pitch, and the space between the upper floor and the roof should be ventilated by a lattice window at each gable end, or something equivalent, to pass out the warm air which will accumulate beneath the roof.

From the hints we have given we think E. will discover where his house is defective.

Those who do not enjoy the luxury of ice these hot days will do well to preserve these directions and prepare a house in time for next winter.

A PLEA FOR A HUMBUG.

EDITORS SOUTHERN CULTIVATOR—The Oregon Pea has attracted so much quill work of late that a man would be regarded as insane by some, who would endorse it now, as one of the greatest improvers of the soil that we could plant in the South. We are half inclined to brave the odium and say, it is the *very best* pea for the corn planter we have ever seen. We could not endorse the humbug at \$80 per bushel—and, with "Broomsedge," put our foot on that. We have had it growing for ten years, and paid no other regard to it than in having a few quarts annually gathered for our seed box. We never planted it after the first time, and when it became a *priceless humbug* we saved a peck of seed. With these, we planted an acre, or two of poor, dry hill-side in our peach orchard. They grew, flourished and fell to the ground under the weight of pods they bore. We gathered a barrel of seed amongst our calves, Suffolks and poultry, which ran on them, and in the winter plowed down the vines as a salvo to the land preparatory to putting it in corn. The prize Devon heifer, "Alice," which attracted so much attention at your Fair, for her symmetry and condition, was taken off that Oregon Pea patch to the ears which bore her to Augusta. Her condition was the effect of the Oregon Peas alone. My Suffolks almost suffocated with fat, from gleaning the ripe peas. And my guinea fowls, continued laying and hatching till November, furnishing me with young birds until late in the spring.

I planted the piece of ground in corn, not suspecting that the stock had trampled in seed enough for a stand. The corn was plowed once and the stand of peas is now thicker than I could desire—twelve and fifteen inches high. The corn, although it has been neglected in order to give the peas a fair shake, is now of fine size and color, and the peach trees have made a vigorous growth. The land has evidently been improved by the subversion and

shading of the pea vines. I think, for stock and manuring, it is very valuable, and hence this plea which simple justice to the *much abused* demands at my hand.

My Rescue Grass, and also that of several of my friends, has come up to all that Mr. IVERSON claims for it. I gave it a fair trial, and would not be without it for any amount. I cannot bear to see men humbug themselves, as so many have done, who have purchased Rescue Grass seed, and left it to take care of itself. Such men are not lights to read by. They are blind to common sense, and deserve failure—because it is the crop they expect to reap.

A. G. SUMMER.

Ravencroft, (near Alston,) S. C., June, 1855.

WORDS OF ENCOURAGEMENT FROM A BOOK FARMER.

EDITORS SOUTHERN CULTIVATOR—I have been a subscriber to your *Cultivator* for over two years, and I have never had reason to complain of it. I appreciate it above all other journals known for its general information in regard to tilling the soil and farm economy, so I feel it my duty to bear some humble part in circulating it more extensively through our land of flowers; therefore I send you the name of one of my neighbors, and the dollar accompanying it, which I hope will reach you safe, and you will send the *Cultivator* and its back numbers to him.

I hope I shall be able to send you other names before long, as "book farming" is bound to take the lead. Those dry summers have proved that *deep plowing* is the only way to make corn. I have made corn, plenty and to spare, ever since I have been a subscriber to the *Cultivator*.

A. W.

Waukeenan, Fla., June, 1855.

COMBUSTION OF COTTON.

MESSRS. EDITORS—I would render an essential service to an important branch of Southern interest by calling attention to a subject deserving the most serious consideration. I refer to the Spontaneous Combustion (ignition, rather) of Cotton, with the cause giving rise to it. My attention was particularly awakened to the subject by noticing the disastrous losses recently on the Tennessee and Mississippi rivers. Such accidents are far from rare, are forever in danger of recurring, and are at all times accompanied with great destruction of property and danger to human life. For many years it was supposed that cargoes of cotton on steamboats became ignited by contact with, or proximity to, the boilers—else from sparks falling from the stack pipes. But repeated accidents, together with experiments, have finally established the fact, that cotton frequently takes fire, especially when in considerable bulk, without the presence of artificial heat. This is undoubtedly caused by the oil of the seeds, which must be more or less bruised during the ginning of the cotton, and escaping, saturates the mass. This oil is of the class termed "*fixed*," "*vegetable*" and "*siccative*" oils. This last name it takes from its tendency to dry upon exposure; linseed oil is a good illustration of the fact, and familiar to most persons. If a given quantity of this fluid be exposed to the atmosphere at ordinary temperature, it will be observed gradually to diminish, and finally, losing the mobility of a fluid, it becomes semi-solid and gummy to the touch. Now it is important to observe that this great change of consistency has not been brought about by evaporation altogether, but is in a great measure attributable to the chemical changes the oil has undergone upon exposure. Since the first moment the external air had access to it, a loss commences on the one side and a corresponding gain on the other. The air loses a part of its oxygen which combines with the

fluid while the oil loses nothing at this period beyond a minimum of its whole elements in combination, which escape as the vapor of the oil. M. Dausure made a number of experiments, the result of which may be found in the *Annales de Chimie et de Physiologie*, XLIX, 225, to ascertain the rapidity with which fixed oils relatively absorbed oxygen. Olive oil, recently expressed, was exposed over mercury to an atmosphere of pure oxygen gas, but underwent no alteration for five months, absorbing only about its own volume of the gas. The absorption from this time proceeded with great rapidity, so that by the end of the year it had absorbed 11 times its bulk of oxygen, and at the close of the fourth year the amount absorbed was 102 times its volume. The oil of hemp seed, on exposure, absorbed less than its own volume in the course of a month, but subsequently the absorption went forward with such rapidity that by the end of the year the quantity equalled 155 times its volume. If any porous inflammable material be saturated with oil containing so much oxygen, combustion will rapidly ensue. Under peculiar circumstances, as where artificial heat, even in moderate quantity is applied, fresh oil (linseed particularly) has been known to take up oxygen with such rapidity as to fire the mass in twenty-four hours.

Last winter, Mr. Van Rensselaer, of Albany, (I think,) lost a valuable factory by fire. The explanation of its occurrence given by the workmen, was, from a bundle of cotton rags left in a vessel containing linseed oil and turpentine, for what purpose used, I don't remember. Mr. V. R. being scarcely satisfied with the explanation, placed the different articles enumerated, under similar circumstances, when, ignition speedily ensued, demonstrating the possibility of the accident having occurred as stated, whether such was actually the case or not.

It is interesting to observe here, that among the fixed oils, those extracted from the seeds of plants are more remarkable for this "siccant" or drying quality; in other words, have the most marked affinity for oxygen. The experiments mentioned above evince a wide difference in this particular—the oil of hempseed absorbing in one year more than the olive in four times that period. This affinity on the part of fixed oils being known, together with the destructive results to be apprehended when combustible matter is brought into contact with them, under circumstances favorable to produce then, it becomes all interested to cast about for means to obviate them. The cause of the disease being known, we must provide against future cases by efficient prophylaxis. Prevention of the danger necessarily involves the getting rid of the oil with which the cotton is more or less impregnated. The means employed may be addressed either to the gin in the way of protecting, as far as possible, the seed from injury, or else to the cleansing of the mass after it has been run through the machine. To furnish these, I leave, for the present, to the ingenuity of an inventive people. If not speedily done, however, it may be the good fortune of those who detected the malady also to devise the cure.—*Southern Times*.

MEAN'S GRASS—DEEP PLOWING IN DROUTH.

EDITORS SOUTHERN CULTIVATOR—Enclosed please find some seeds, and a blade of a grass, of which, for reasons that will be stated, I am anxious to know the kind or variety, and whether it will be difficult to get clear of. It has been on the place nearly three years, and was supposed to have been brought here in millet seed purchased in Louisville, Ky. It has a root similar to cane or reed, but this root is very tender. Thus far we have found it hard to kill, as it seems to come up as well after being

turned under as before. In breaking up the ground this spring it was turned completely under, but in three weeks it was two and one-half to three feet high. Horses eat it well, and I suppose it would make good hay, but fear it may be hard to eradicate. The description of the "Means" grass suits it.

I have just seen a communication in your *Cultivator* concerning the policy of plowing Corn in time of drouth. Early this spring, I thought as does your correspondent "J," but having nothing else to do plowed my Corn, with marked benefit. I think it can do Corn no harm to plow in dry weather, unless with a turn up plow; stir the ground lightly, on top, don't cut the roots, and no harm will be done, if every one will only pulverize the soil deep enough and fine enough before. H.

Arkansas Post, Ark., June, 1855.

REMARKS.—The head of grass accompanying the above bears a striking resemblance to the "Mean's" Grass, though we are not positive that it is the same. It is hard to eradicate; but a thorough plowing in the fall, and the exposure of the roots to severe winter frosts, sometimes proves effectual.—EDS.

BOTS IN HORSES—CORRECTION.

EDITORS SOUTHERN CULTIVATOR—One error I would like you to correct, namely: you print "Bots of the 19th century, don't believe in 'Will o' the Wispers.'" It should read "Will the Whisperer." This was a celebrated Irish character named Sullivan, (whose soubriquet was "The Whisperer,") and in "Croker's Traditions of Ireland" he is spoken of as a horse tamer of the most extraordinary kind. He was vulgarly believed to possess magical power in his "whispering" to a horse, and completely subduing his most inveterate tricks and vices. The worst horse or mule—whether previously broken or unhandled—submitted without show of resistance to the magical influence of his art, and in the space of half-an-hour became gentle and tractable. When sent for to tame a beast, it is said: "After a tete a tete of a half-hour, during which no bustle was heard," (the door of the stable was always required to be shut during this equine mesmerism,) "the signal was made, and upon opening the door the horse appeared to be lying down, and the man by his side playing with him like a child with a puppy dog. From that time he was found perfectly willing to submit to any discipline however repugnant to his nature before," &c., &c. It is a long and interesting story, to those who like to read such extracts, and may be found in "The History of the Horse," Youatt's compilation.

Respectfully your friend,

W. P. W.

Isle of Hope (near Savannah), Ga., June, 1855.

MANUAL LABOR SCHOOLS—CAUSES OF FAILURE—PLAN ON WHICH THEY WOULD SUCCEED.

EDITORS SOUTHERN CULTIVATOR—We frequently hear it said that a theory is good, but that it does not work well; and daily we hear the theoretical and practical man contrasted. It is evident that a theory which is good, will work, and a man, whose practice is good, must be carrying out a good theory. At the same time, it is equally evident that many visionary schemes acquire a great popularity and excite the hopes of the sanguine, which prove impracticable, or, when put in practice, work very differently, and sometimes opposite to what had been expected.

Among these failures may be classed Manual Labor Schools, from which great results were expected, and which have so signally failed, that it would be about as easy to induce most men to go into a Multicaulis specu-

lation, as into the establishment of a Manual Labor School, under that name. The object of the present article is to point out the causes of their failure and to give the outlines of a system founded on better principles.

Some who favored and patronized these schools were men who, having reared their sons in idleness, sent them to school as a *punishment*, and were sorely disappointed that *bad* habits were not *forced* out and *good* habits *forced* in by a teacher. And that, too, at the age and under the circumstances, which, as common sense ought to teach any one, most encourage resistance to force. Ought it to be expected that a boy, who has grown up unmanaged, at home, under the absolute government of his father, with none to encourage him in rebellion, would submit to the limited, delegated authority of a teacher, especially when associated with boys of the same age, among whom he would naturally aspire to the character of a boy of spirit—a hero?

Others, again, thought that as their sons worked for their board, the school should be a cheap one. They were not willing to pay as much money at such a school, as at another where no work was required of them, which was about as reasonable as to expect that tuition fees for two branches of study should be less than for one.

Both of these were degrading their sons to the condition of slaves. Both were doing all in their power to excite their pride against manual labor. They, and the teacher often, and the trustees, showed an ultra-ignorance of human nature. Proper means were not used to excite interest in the Manual Labor department, and to put it on a level with the literary department in respectability. How this is to be done will best appear by giving the sketch of a plan of a school that would succeed.

The first and indispensable element of success is a suitable teacher. He should be a man who, by his talents and learning, would command respect. "Not a novice," but one whose reputation was established. In addition to talents and literary acquirements of high order, plain, practical, common-sense should be a leading trait in his character. He should have much of that which gave FRANKLIN his greatness—a disposition to make every principle and fact of science and knowledge bring forth a practical result. Of course, he should have that firmness and love of justice that would overawe the unruly; that gentleness, sociability and aptness to teach that would win the love of all.

All these qualities will not ensure success unless combined with one more, a want of which will be a sure cause of failure. He must be far from like the college bred gentleman, who (to use the words of a distinguished preacher and Doctor of Divinity) "Can't saddle a horse without smelling his fingers for half an hour afterwards;" in other words, he must not be ashamed nor afraid of work, but willing to *lead* his pupils in the labor as in the literary and scientific departments. A man of this character, occupying the highest position in society, teaching the dignity of labor by precept and example, would not fail. A school conducted by such a man would succeed.

L.

Sumterville, Ala., June, 1855.

[TO BE CONTINUED.]

HISTORY OF INSECTS—THE CROPS, &c.

EDITORS SOUTHERN CULTIVATOR—I am now engaged in a microscopic examination of all the insects that are destructive to many of our growing crops, and will give, so far as I can ascertain, their history, anatomy, habitudes, modes of generation, &c., together with accurate drawings made from the camera attached to my microscope. Believing that this subject is of great importance, and for the sole purpose of contributing something to our knowledge, however imperfect that contribution may be, yet it

will stimulate others to more extensive and minute investigations of a new field of science beneficial to the agriculturist, &c., if it meets with your approbation, when you receive my first communication, you can publish it in your paper. I wish only to benefit my countrymen.*

We are now engaged in cutting Wheat, and there never was heavier crops made; Oats are fine, Corn is very luxuriant, and all garden vegetables are extra. We have had fine rains; Cotton looks well; our fruit trees are loaded; my vines are perfectly thick with grapes, and, indeed, we have cause to be very thankful for these great blessings. I have noticed this spring some things which I never saw before. Our peach trees bloomed early and were apparently full of bloom; the frost came and killed the fruit, yet in a few days the trees bloomed again, and we have the greatest abundance of fruit. I have noticed in a great many blossoms from two to three, and in some few four separate cups containing fruit; this is to me very curious.

I have some fourteen rows of sweet potatoes set out in level ground, to test the matter; I have some two acres already set out, and the vines are running across the rows. If this desultory communication of mine will interest you it will repay me amply for the time.

Yours very respectfully, GEORGE D. NORRIS.

New Market, Madison County, Ala., June, 1855.

CORN CULTURE IN TEXAS—HOGS—SHEEP—SEA ISLAND COTTON, &c.

EDITORS SOUTHERN CULTIVATOR—As your paper professes to be the medium through which farmers are permitted to communicate their ideas to one another, and free to all who may couch their thoughts in readable language, and as it is your request that all write something, I have concluded to submit the remarks that follow to your judgment; if you think them worthy of insertion in your columns they are at your disposal; if not, you can easily put them into the flames.

Until about a week ago, we have had, in this country, a most unusually severe drouth, (having lasted from sometime in February) and during this time I have had occasion to notice the progress of several crops as well in my immediate neighborhood as on the river (Guadalupe.)

I will here state that the land in my neighborhood is a loose, black, sandy land, with a white subsoil, resembling marl, the surface soil being from one to four feet deep—generally about three—the timber, what there is, being Post Oak, Live Oak, some Pecan and Musquit, with, now and then, Hackberry, Wild China, &c.; the China, Pecan and Hackberry growing principally where the ants have worked up the white subsoil.

The river lands are a stiff hog wallow; the prairie part sparsely covered with scrubby Musquit; the river bottom averaging about one-quarter of a mile wide, covered with a fine growth of Pecan, Walnut, Hackberry, Elm, Box Alder, &c.; the back lands with Post Oak.

For some time past, the people on the river have been almost "mad" about their lands, and had run them up to the exorbitant price of from \$15 to \$35 per acre, in fact, one man was so "green" as to refuse \$80 per acre; during all this time they have preached the doctrine that our back lands were worthless, and had the idea so deeply impressed upon the minds of all, that immigrants would never look at them until some "loggerheads" came out here and purchased at the nominal price of from one-half to five dollars an acre, and now since this drouth has set in, "wise men" of the river country see the error of their way, and in two months past, river lands have gone down 20 per cent., and back lands risen 50 per cent.

* We shall be very glad to publish the articles of our correspondent, on this or other subjects—Eds.

So much for the river land mania, so completely cured by the fair test they have had of their capability to stand drouth.

But what I intended to say was, principally with regard to deep and shallow plowing of corn; a fair test of both of which systems we have had, both here and on the river, and will simply state the facts as regards the mode of cultivation by two men in this neighborhood. About the same results have followed similar tests on the river lands:

B—— has been living here several years; F—— moved here some time in January, rented a piece of land from B——, enclosed under the same fence as that which B—— cultivates; B—— broke his land deep and close; F—— coming in late, had not time to prepare his so well; B——, in planting, after having thoroughly broken his land broadcast, opened a furrow very deep with a turning plow, then run a shovel as deep as possible in the bottom of this and dropped his corn, covered it and leveled it with a harrow. After his corn was up some four inches high, F——, having thrown his land into high beds, opened a furrow between them, covered with a turning plow and knocked off with board. The corn in both pieces came up with little or no rain; and about the same time both commenced working. B—— run round his very shallow with a turning plow; F—— run round his with a shovel next to the corn, following with a two-horse turning plow, as deep as the plow (Peacock) would run, piling the dirt around the corn as high as possible. About two weeks afterwards, corn being about three feet high, F—— went down to work his corn again, and asked B—— how he intended to work his this time; he answered that he never intended to put another plow in it unless it rained, and asked F—— what he was going to do with his; he told him to come down and see. He went down, and there were F——'s hands with shovels, turning plows and hoes, as before; the shovels running as close to the corn as possible, turning plows following to bank up, and the hoes completing the ridging.

Now for the result. In about one week a light rain fell; B—— run around his corn with a turning plow about one inch deep; hot, dry weather lasted about three weeks; F——'s corn continued to grow, so that, when the rain came (about the first of June) it was seven feet high, rich, and growing, never having wilted; B——'s corn at the same time—about two weeks older—was about five feet high, very irregular, silking and tasselling, and the stalks about 30 per cent. smaller than F——'s.

Now, it may be asked, why this is so? B——'s land was much better broke at first. Why did it not, therefore, do best? Well, this secret scientific men have been trying to reveal.

Although I am not, myself, very scientific, I think enough has been said by scientific men to warrant them in the conclusion that they done enough to let unprejudiced men into the secret.

It is a well known fact, that nothing, either in the animal or vegetable kingdom, can thrive without access to air and light; the simple elements of which these imponderable agents are composed are as essential to the growth and thrift of the corn plant as of man; and it is plain that unless the earth is kept well pulverized these fine atoms can never enter the surface nor find their way to the corn roots.

Now, B——'s error did not consist in the thorough breaking he gave his land at first; but in not keeping it so pulverized as to admit the light and air, and had it not been for this breaking, by which means the roots were permitted to extend themselves downward in search of moisture, his corn would not have done as well as it did.

Now, I am an advocate of close, deep plowing, with

certain limits; but after corn has got to be 4 feet high it would not do; for after that time the roots (if previously well cultivated) will have spread so as to make deep plowing seriously injurious, especially in dry weather. If, however, previous to this time, it has received good cultivation it will need no more. What I mean by good cultivation would amount to deep, thorough breaking, and two good deep, close, plowings, followed by the hoes.

I allude, here, to the lands in our section, where neither Crab Grass, Burrs nor Tie-Vine has taken possession, as in some of the older States. But I believe the principle of every farmer should be to plow his corn as long as it is necessary to pulverize the soil and will not injure the roots. So much for corn culture.

Now, I wish some information. Our large Prairies, although traversed by running spring branches for every half mile in distance, are not suitable to hog raising; and our farmers, before they can raise meat, must raise corn. Now, as it is as cheap to raise good hogs as bad ones, I wish to know what breeds would be best adapted to this sort of country, and which would be cheapest, taking into consideration the amount of feed requisite, the amount and quality of meat produced, &c.

Also, what breed of sheep are best adapted to our climate?—which are the cheapest and most profitable, weight and texture of wool, amount and quality of mutton, hardiness, &c., all taken into account?

Now, being done with bread, meat and wool, we come to Cotton.

Several of our planters have tried the Sea Island Cotton, and it proves well.

Query—Is it essential that this cotton be put up in round bags? Will packing, in the press generally used for common cotton, a small amount, say 300 pounds in the bale, injure the lint more or even so bad as the mauling process generally gone through with, in making round bags?

I shall be glad to hear from yourselves, or from any of your correspondents who may see fit to take notice of my inquiries. And if there are any who have the proper kinds of hogs and sheep for sale, let me hear from them, too; giving all the particulars, with regard to the animals, the chances for shipping, price, &c.

With sincere wishes for your success, I am truly, &c.,
G. W. L.

Pleasant Hill, Gonzales co., Texas, June, 1855.

COTTON RIGGING FOR SHIPS.

THIS article, we are glad to see, continues to grow in public favor. The *Delta* states that at one time, during the month of April, there were the following ships—all new and of large tonnage—in the port of New Orleans, with a part or the whole of their running rigging and hawsers, of cotton cordage:—North America, Escort, Shakespeare, of Boston; Knickerbocker, of New York; Erie, Liberty, St. Patrick, of Thomaston, Me; Walter Scott, Civillian, Saniscott, Robt. Lane, Sea Breeze, Sewell, of Boston. The officers of all these ships were unanimous in their testimony in favor of cotton cordage for running rigging, and many of them thought it would be adopted for standing also.

The *Delta* states that Donald McKay, the celebrated ship builder at Boston, the owner and builder of the famous clipper ship Republic, is adopting cotton cordage for all his new ships. The large new clipper ship Caleb Cushing, recently built at Newburyport, Mass., has all her rigging, both standing and running, of cotton cordage, Capt. J. P. Smith, of the ship Water Scott, gives it as his opinion that it will outlast any rope, whether hemp or

manilla. He is also quite sure the cotton rope is the strongest of the three ropes, as by bending cotton and manilla ropes of equal sizes together, and heaving on it, at the capstan, the manilla will always part first. Captain Brown, of the ship *Escort*, says that he has used cotton cordage, twenty-eight months on the ship *Medora*, and found it to wear far better, on all accounts, than any other rigging he ever used. In wet weather, likewise, it is more pliable, and in frosty weather it is not so stiff as manilla. After it is used a few months it becomes smooth and glossy, and works through the blocks much better than any other rope. After the *Escort* was launched last autumn, at Bristol, Me., she was made fast with two manilla lines, and three and a half inch line of cotton cordage seventy fathoms in length, and a very heavy blow came up and the two manilla lines parted, and the ship rode for more than 24 hours, and during the gale, with this line run out its whole length, alone to hold her, and the strain was so great that it wore and imbedded its full size into the white oak cross-trees, without breaking a thread in it. It is Captain Brown's opinion that no manilla or hemp rope of the same size could have held the ship under like circumstances. A number of shipmaster's statements, all to the same purport as the above, are published in the *Delta*, all going to show that cotton cordages like cotton duck, is destined to come into general use.

THE LOGAN GRAZIER,

A POEM OF WESTERN VIRGINIA.

BY THOMAS DUNN ENGLISH.

At dawn to where the herbage grows,
Up yonder hill the grazier goes.
Obedient to his every word,
Before him stalks the lowing herd.
Reluctant in the misty morn,
With stamping foot and tossing horn,
With lengthened low and angry moan,
Through drain and hollow, up the hill
They pass obedient to his will.

The slender ox and mighty bull—
The grazier thinks them beautiful.
You see less beauty in the herd
Than in yon orange-tinted bird;
You fix your better pleased gaze
On yon broad sweep of emerald maize,
Yon maples on the hill-side high,
Or on yon field of waving rye.
More pleased with maize, or rye, or trees—
The grazier's sight is not on these.
He sees a netted purse of gold,
In every bellowing three-year-old.
He sees new comforts round his home,
When buyers down from Tazewell come.

He sees his cabin nigh the creek,
Its mud-daubed chimney changed to brick,
Its rude logs hid by clap-boards sawed,
Split shingles on its roof so broad;
New puncheons on the worn-out floor,
A picket fence before the door,
And cups of tin and plates of delf,
And pewter spoons adorn the shelf.
Close where the rifle hangs on hooks,
On cupboard tops are rows of books—
The Pilgrim of the dreaming John,
And Weems's life of Marion;
The well thumbed speeches of Calhoun,
The pictured life of Daniel Boone;
D' Aubigne's story told so well,
How Luther fought and Cranmer fell.

To please his wife a yellow gown,
And beads to deck his daughters brown.
A jack-knife for his youngest son,
A rifle for his eldest one.
All these to him the cattle low,
As up the hill they slowly go.

He fears no ravage of disease,
'Mong brutes so strong and fat as these.
There's salt enough for them in store,
Brought from Kanawha's muddy shore.
The herbage on the hill is good,
The fern is thick within the wood,
There's tender grass in yonder drain,
And pea-vine on the summit plain.
High thought of gain that moment thrills
The grazier of the Logan hills.
He envies not the hero bold,
He cares not who may office hold.
The statesman's pride, the stout man's limb,
The lover's hopes are naught to him.
His mind three things alone receives—
His wife, his children, and his bees.
So these may flourish and be fair,
All else around is smoke and air.

Oh, Logan grazier, stout and strong,
Despising fraud, defying wrong,
Brave as thine ancestors who bore
The scars of combat long and sore,
And fearless met in battle shock,
The wild and painted Shawanock;
True as the rifle in thy hand,
And generous as thy fertile land—
Full oft I've eaten by thy side
Thy cakes of corn and venison fried:
Oft in thy cabin as thy guest
Have stretched my weary limbs to rest.
I love to note thy honest brow,
Staunch friend and true companion thou;
And know no manlier form is seen
Than dwells within thy coat of jeah;
Truth fills those eyes so keenly set
Beneath thy fox skin cap, and yet
I would not that thy lot were mine,
I would not that my lot were thine.
Guard thou thy beeves and count thy gold,
Be glad when those great herds are sold.

For me, by midnight lamp, I pore
My manuscript in silence o'er.
Each to the path that suits his feet;
Each toil, for time is moving fleet,
And soon in linen shroud arrayed,
Both in our narrow coffins laid,
It matters not if cattle fair,
Or making songs has been our care.
The poet's and the grazier's form
Shall feed alike the greedy worm;
Shall pass the poet's glowing words,
Shall pass the grazier's lowing herds;
And from men's memory fade away
Both grazier's shout and poet's lay.

HEALING PAINT FOR DECAYED BRANCHES, OR SNAGS, IN FOREST AND OTHER TREES.—Dissolve two ounces of corrosive sublimate in spirits of wine and mix with three pints of best tar. The decayed parts to be pared off or gouged out below the level of the surrounding sound bark, and the wound well painted over, with the above. All limbs that require removal should be cut off close to the trunk, or larger branch, and treated in the same way.—*Gard. Chron.*

WONDERS OF THE ATMOSPHERE.

THE Atmosphere forms a spherical shell surrounding the earth to a depth which is unknown to us by reason of its growing tenuity, as it is released from the pressure of its own superincumbent mass. Its upper surface cannot be nearer to us than fifty, and can scarcely be more remote than five hundred miles. It surrounds us on all sides, yet we see it not; it presses on us with a load of fifteen pounds on every square inch of surface of our bodies, or from seventy to one hundred tons on us all, yet we do not so much as feel its weight. Softer than the finest down—more impalpable than the finest gossamer—it leaves the cobweb undisturbed, and scarcely stirs the slightest flower that feeds on the dew it supplies; yet it bears the fleets of nations on its wings around the world, and crushes the most refractory substance with its weight. When in motion, its force is sufficient to level the most stately forests and stable buildings with the earth—to raise the waters of the ocean into ridges like mountains, and dash the strongest ships to pieces, like toys. It warms and cools by turns the earth and the living creatures that inhabit it. It draws up vapors from the sea and land, retains them dissolved in itself or suspended in cisterns of clouds, and throws them down again as rain or dew when they are required. It bends the rays of the sun from their path to give us the twilight of evening and of dawn—it disperses and refracts their various tints to beautify the approach and the retreat of the orb of day. But for the atmosphere, sunshine would burst on us and fail us at once—and at once remove us from midnight darkness to the blaze of noon. We should have no twilight to soften and beautify the landscape—no clouds to shade us from the scorching heat—but the bald earth, as it revolved on its axis, would turn its tanned and weathered front to the full and unmitigated rays of the Lord of Day. It affords the gas which vivifies and warms our frames, and receives into itself that which had been polluted by use, and is thrown off as noxious. It feeds the flame of life exactly as it does that of the fire—it is in both cases consumed, and affords food of consumption; in both cases it becomes combined with charcoal, which requires it for combustion, and is removed by it when this is over.

"It is only the girdling encircling air," says a writer in the *North British Review*, "that flows above and around us, that makes the whole world kin. The carbonic acid with which to-day our breathing fills the air, to-morrow seeks its way round the world. The date trees that grow round the falls of the Nile will drink it in by their leaves; the cedars of Lebanon will take of it to add to their stature; the cocoa-nuts of Tahiti will grow rapidly upon it; and the palms and banyans of Japan will change it into flowers. The oxygen we are breathing was distilled for us some short time ago by the magnolias of Savannah, and the great trees that skirt the Orinoco and the Amazon—the giant rhododendrons of the Himalayas contributed to it, and the roses and myrtles of Cashmere, the cinnamon-tree of Ceylon, and the forests older than the floods buried deep in the heart of Africa, far behind the Mountains of the Moon. The rain we see descending was thawed for us out of the icebergs which have watched the Polar star for ages; and the lotus lilies have soaked up from the Nile, and exhaled as vapor, snows that rested on the summits of the Alps."

"The atmosphere," says Mann, "which forms the outer surface of the habitable world, is a vast reservoir, into which the supply of food designed for living creatures is thrown—or, in one word, it is itself the food in its simple form of all living creatures. The animal grinds down the fibre and the tissue of the plant, or the nutritious store that has been laid up within its cells, and converts these into the substance of which its own organs are composed. The plant acquires the organs and nutritious store thus yield-

ed up as food to the animal from the invulnerable air surrounding it. But animals are furnished with the means of locomotion and of seizure—they can approach their food, and lay hold of and swallow it; plants must await till their food comes to them. No solid particles find access to their frames; the restless ambient air, which rushes past them loaded with the carbon, the hydrogen, the oxygen, the water—everything they need in shape of supplies—is constantly at hand to minister to their wants, not only to afford them food in due season, but in the shape and fashion in which alone it can avail them."

RULES FOR THE APPLICATION OF SUPERPHOSPHATE OF LIME.

SUPERPHOSPHATE of lime consists mainly of bones decomposed by sulphuric acid. In this form it is entirely harmless when applied about the roots of plants. But to increase the activity of this fertilizer and add to its qualities, which it possesses only in a very limited degree, guano or suphate of ammonia is added. Ammonia is a very active alkali, and like a quick-lime and potash, readily combines with and destroys or seriously injures almost every substance brought into contact with it. Containing, like guano, this caustic quality in a similar, yet in a very subdued degree, the rules for the application of superphosphate are in a great measure similar to those for the application of guano.

It may be sown broadcast or in drills, but in either case should be covered with earth by subsequent plowing or thoroughly harrowing. The seeds or roots should never come directly in contact with the superphosphate, though the covering of earth may be less than for guano. When applied as a top-dressing to grass land, it may first be mixed with several times its bulk of peat or swamp muck, that has been exposed to the air for six months or a year, or with turf, charcoal or plaster.

From 300 to 500 pounds per acre is a liberal application for exhausted lands, and 200 to 400 pounds as a top-dressing for meadows. When applied near or around the hills, from half to three-fourths of a gill is sufficient for corn and potatoes.—*Am. Agriculturist*.

SCRATCHES IN HORSES—CURE FOR IT, &C.

EDITORS SOUTHERN CULTIVATOR—Believing that every important or sovereign remedy should be made known, I send you one for Scratches in Horses. It is more important, however, for high heels (an aggravated case of scratches in mules, caused by corning too high the first winter after they are weaned.)

Take a teaspoonful of arsenic, put it in half a pint of boiling water; let it remain from three to five minutes. After it has cooled, apply with a mop to the parts affected. "It is a certain cure," and the only sovereign remedy I ever tried on mules.

Having been in the trade 17 years, I have tried all. I never knew two applications to fail, and nine times out of ten one will suffice.

Put this recipe in "ship shape," and give it an insertion in your excellent *Cultivator*. It is, perhaps, proper to remark that no precaution is necessary after the application. Let them "rip," as usual.

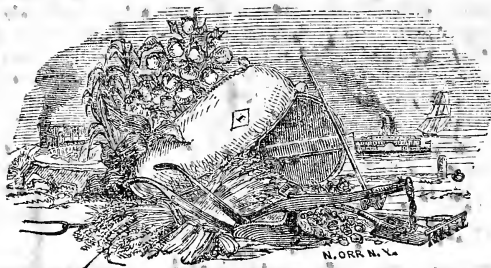
I will continue to send you a subscriber occasionally. I feel an abiding interest in your sterling paper. A friend of mine to whom I sent it remarked that it was intrinsically worth \$51, so he made \$50 clear by the investment. This is, in fact, below the mark, for he has a much neater farm, better stock, and raises a third more per acre now than before he was a subscriber.

Wishing that your efforts may be properly appreciated, I subscribe myself as heretofore, &c.,

Your friend,

G. T. ALLMAN.

Cornerstone, Tenn., May, 1855.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 8..... AUGUST, 1855.

ANSWERS TO INQUIRIES, &c.

THE FAIR.—IMPLEMENTS, &c.—J. L. R.—The Fair opens in Atlanta on the 11th of September. The large Show Bill of the Society, just issued, contains the entire Premium List, Regulations, &c., &c. We have mailed you one. It is issued as an *extra* of our paper, and will go anywhere at newspaper postage. Your machine, if a good one, will doubtless attract attention, and prove remunerating. Bring it to the Fair, by all means.

STRAWBERRIES.—T. S.—See "*Brief Notes on Strawberries*," under editorial head, in present number. The "*Crescent Seedling*" bore fruit until the 10th of July, this season; but we do not consider it equal to Hoveys, in all respects. Your letter was mislaid, or it would have been answered sooner. Will give full directions for the culture of Strawberries in our September or October number. Any time before the 1st of January will do to plant.

THE TURNIP FLY.—W. P.—We have not usually suffered much from this pest. Remedies will be found under the proper head in "*Work for the Month*." A contemporary also recommends the following:—"Two ounces of sulphur, commonly called flower of brimstone, mixed with a pound turnip seed, will effectually prevent the fly from destroying the crop. This preventive is extremely cheap, the cost not exceeding 3 or 4 cents per acre. In mixing, employ a little rape or lamp oil, which will cause the sulphur to adhere to the seed."

DRYING FIGS.—E. M. K.—Figs make a delicious sweetmeat or preserve, if properly put up in a fine syrup. They also make one of the best *pickles* we have ever eaten, and may readily be dried for exportation, like the Smyrna Figs of commerce. For this mode (*drying*) we find the following directions in a late number of the *Mobile Advertiser*:—"Make water very sweet with brown sugar, (not a syrup) and when it is quite hot put in the fruit and let it boil for half an hour, or until the figs assume a swollen appearance; then take them out and place them in the sun; repeat the operation from day to day, and after the third time, when sufficiently dried, they may be packed in drums; as the different layers are placed, sugar may be sprinkled upon them, if desirable, but the fruit will be sweet enough without it." The recipe for *Pickling Figs* will be found elsewhere in present number, and we advise all who have the fruit to try it.

FRUIT TREES.—Geo. D. N.—We can probably supply your wants in the fall.

FEED CUTTERS, &c.—W. C. N.—*Seely's* machine is well spoken of. It cuts hay, straw, stalks, shucks, &c., &c. The "*Little Giant*" is undoubtedly one of the best Corn and Cob Crushers in use. You would find both of

these machines very useful and economical. *Seely's* Feed Cutter costs \$18, in Baltimore, Md. It may be had from ROBBINS & BIEB, of that city. The "*Little Giant*" is for sale here and throughout the country. See advertisement.

MAKING TURPENTINE.—*Florida.*—A very complete article on this subject will appear in our next number.

A great number of Answers are unavoidably postponed until our next number, by the press of matter in our columns and the early day at which we are obliged to go to press.

TO CORRESPONDENTS.—We are obliged to defer until our next an unusual number of interesting articles, attached to which are the following signatures:

J. A. T.—W. Wilcox, M.D.—A. C. A.—J. M. Hatcher—J. B. Garber—J. R. F.—Junior—Zelotes H. Mason, M.D.—H. H. Harris—E. Jenkins—Allen Martin—Green Horn—A. J. Cook—Clisbe Austin—Jenkins—W. R. J., &c., &c.

We return thanks to our friends for their esteemed favors, all of which shall appear in due season.

BRIEF NOTES ON STRAWBERRIES.

DURING the past two or three years, we have carefully tested more than Thirty varieties of the Strawberry, and we append a list of some of those most desirable for market, and the garden of the amateur. It is well known that the blossoms of the Strawberry are of a threefold character, viz:—*Hermaphrodite*, or perfect; *Staminate*, or male; and *Pistillate*, or female. We shall, therefore, classify each under its respective head, adding merely such brief remarks as our own experience and observation suggest:

HERMAPHRODITE.—The only plants of this class that we deem of especial value, are *Longworth's Prolific*, (sometimes called "*Schneicke's Hermaphrodite*"); and *Walker's Seedling*. The "*Prolific*" is a remarkably vigorous grower, and should, therefore, be planted on rather poor soil. It is a good bearer, the fruit being quite large, roundish obovate, bright crimson, of fine flavor and quality. The berries are generally from 2 to 3 inches in circumference, though occasionally they grow much larger. A specimen grown the past season by Mrs. Geo. A. Oates, of this city, measured considerably over four inches. *Walker's Seedling* is generally classed among the staminate, but we think the blossoms nearly or quite as "perfect" as those of any other variety. The fruit is an especial favorite with us, and may be thus described: size, generally medium; regular, uniform roundish conical or pine apple shape; dark crimson or purple in color; flesh of the highest flavor, *very firm*, parts easily from the hull, and is excellent for market. Bears moderate crops, the fruit "*keeping*" on the vine better than most sorts. Both of the above may be relied on for fair crops, of fruit, when planted singly, or in separate beds, distinct from other varieties.

STAMINATE.—The staminate or male plants are now generally used by enlightened cultivators as impregnators for the more fruitful and productive pistillates. Some staminate there are, however, which can be depended on for small or medium crops of excellent fruit, and these may be considered valuable by amateur gardeners, who desire a variety. The *Large Early Scarlet*, *Boston Pine*, *British Queen*, *White Bigton Pine*, and *Prolific Haulboy* are among the best. Of these we prefer the *Boston Pine* and *Early Scarlet*, both of which bear moderate crops of good fruit—the *Pine* having the advantage in size, and the *Scarlet* in flavor.

PISTILLATE.—This class of plants, when properly impregnated or fertilized by a due admixture of staminate, bears abundant crops of the finest fruit, but if planted separately, or isolated from the influence of the male blossom, they fail to produce any but imperfect specimens. We regard the following as most desirable: 1st. *Hovey's Seedling*—for large size, fine appearance, general productiveness and "good" quality, this well-known variety has long been a favorite, and remains so still, notwithstanding the many rival "seedlings" that have sprung up of late years. During the past season, the *Hovey* met and vanquished all the new Ohio strawberries, upon their own ground, at Cincinnati; and the success of Mr. PEABODY and others in extending the bearing season from six weeks to three or four months, with this plant, is well known to most of our readers. It is scarcely necessary to describe a variety so familiar to all gardeners, but as there are yet a great many people who never have seen a berry an inch and a half in diameter, or five or six in circumference, we will quote a few words from Mr. PARDEE: "The vines are vigorous, leaves large in rich soil, rather light [dark?] green, and fruit-stalks of good length [rather short, with us.] Fruit is very large, often five and six, and sometimes over eight inches in circumference (!) roundish oval, conical; color, rich scarlet; seeds slightly imbedded; firm flesh; well adapted for market," &c., &c. It is proper to state that the 5, 6 and 8 inch berries are rarely seen, even in the gardens of the most careful cultivators; but that they have been grown of these dimensions there can be no question. The average size of properly grown berries with us has been from two and a half to three inches, though berries of four inches in circumference are not at all uncommon. 2d. *McAvey's Extra Red*—an Ohio seedling, lately introduced, surpasses in prolific quality any variety that we have yet tested. It is of large size, conical, firm flesh, light crimson or orange color, somewhat deficient in flavor; bears carriage and exposure well—a good market variety. Fruit borne in large bunches or trusses, and remarkably abundant. In all respects desirable for those who cultivate Strawberries on an extensive scale. 3d. *McAvey's Superior*—an Ohio prize berry, of very large size; dark color, irregular shape, conical, roundish; flesh of fair quality; though rather tender for carrying a long distance to market. Deserving of further trial, and the attention of amateurs. 4th. *Crescent Seedling*—originated in New Orleans, and is worthy of more extensive trial at the South. This variety is valuable on account of bearing a late crop, when other kinds are exhausted. We have picked berries from it until the latter part of July, without either mulch or watering, and feel confident that these operations would have greatly extended the bearing season. The berries are often very large, though not uniformly so, and their texture and flavor render them very desirable for market. 5th. *Burr's New Pine* is generally regarded as the standard of fine flavor, but our experience hardly justifies us in so ranking it. It is, undoubtedly, a fine berry, but it is a shy bearer with us, and there are many others, the flavor of which we prefer. Tastes differ, however, in this, as in all things else. 6th. *Black Prince*—an English variety of fair size, and of a remarkably dark crimson or blackish-purple color; flesh firm, and of a rich, musky flavor, when fully ripe; plants vigorous and productive. Valuable, and worthy the attention of all tasteful and curious amateurs. 7th. *Crimson Cone*—a very beautiful, light crimson berry, of medium to large size; uniformly long-conical; brisk, high and rather acid flavor; seeds deeply imbedded, giving the surface a peculiar rasplike appearance; quite productive, and a showy market fruit. Desirable in all collections.

We might add the description of many more varieties, such as *Jenny's Seedling*, *Moyamensing Pine*, *Genesee*

Seedling, *Rival Hudson*, *Bishop's Orange*, *Prolific Hant-bon*, *Buist's Early*, *Cincinnati Hudson*, &c., &c., but we prefer giving some of these further trial before offering an opinion on their merits. The list we have presented contains nearly all desirable sorts, from which our readers may make their own selections; and, when the proper season for planting arrives, we shall offer a few additional remarks on the preparation of the ground, culture, irrigation, &c., &c.

THE ATLANTA FAIR!

The time for preparation is now short, and our friends must be "up and doing." Every arrangement will be made by the Society, and the citizens of Atlanta to accommodate properly the large crowd which will be present, and all who intend competing for the Premiums should lose no time now in getting ready their articles or animals. We will endeavor to publish the Rules and Regulations of the Fair in our September number which will be issued on the 20th of the present month. We can supply applicants with a limited number of the large Show Bills of the Society containing Premium List, Regulations, &c.—per mail.

The Fair opens on the 11th of September, at Atlanta, Ga.

THE SEASONS AND THE CROPS.—We hear nothing but the most favorable reports concerning the crops from all sections of the country, and trust every reader of the *Cultivator* may find himself in the condition of the farmers of East Tennessee, as described by IVINS, of the *Athena Post*, who says:

"Last Wednesday (July 11,) we had such a fall of rain as has not been witnessed before since the birth of the oldest inhabitant. We don't know what our farmers will do if the season continues as favorable a few weeks more—they will make such immense quantities of corn that there will not be room sufficient in the county to build cribs to put it in."

DAVY'S DEVON HERD-BOOK.—We have received from COL. L. G. MORRIS, several copies of this new and valuable work, which we will furnish at \$1 each, or forward per mail, *pre-paid*, at \$1.20.

The volume contains the pedigrees and all other important matters connected with Devon Cattle, both in England and America, up to the present time; and is embellished with several beautiful engravings. Every Devon breeder and admirer of this fine race of cattle, should possess a copy.

THE GRAPE ROT.—We regret to learn that the wet weather of several weeks past has proved quite injurious to the vineyards of some of our neighbors. One of the most extensive Vine Growers of the South, writes us under date of July 14, as follows:

"The rot has recurred in my Isabella Grapes, and within the last six days swept them off from one-half to one-third of their fruit."

Our "native" Southern variety, the Scuppernon, is comparatively exempt from this disease, and as it is a regular and abundant bearer, and withal of good quality, we hope to see its culture extended. Every resident of our favored climate should be able to "sit under his own vine and fig tree" and eat the fruits thereof.

THE SEPTEMBER FAIR.—PREMIUM LIST.

Owing to the inadvertent omission of a most important portion of the prizes for Horses, in the List published in our April number, we herewith insert a correct schedule. It will be seen that in this, as in all other departments, the Society's awards are most discriminating and liberal. We hope to see the fine stock of Georgia and her sister States fully represented at the Fair, which, it will be recollected, is to be held in *Atlanta* from the 11th to the 14th of September:

HORSES.

FIRST CLASS—HORSES OF ALL WORK, DRAFT, &C.

- | | |
|---|-------|
| 1. For best Stallion over 4 years old, | \$20 |
| 2. Second best, " " " | Medal |
| 3. Best Horse Colt 3 years old, | \$10 |
| 4. Second best, " " " | Medal |
| 5. Best Horse Colt 2 years old, | \$10 |
| 6. Second best, " " " | Medal |
| 7. Best Colt, 1 year old, | \$5 |
| 8. Second best 1 year old, | Medal |
| 9. Best Mare 4 years old and over, | \$10 |
| 10. Second best 4 years old and over, | Medal |
| 11. Best Filly 3 years old, | \$10 |
| 12. Second best 3 years old, | Medal |
| 13. Best Filly 2 years old, | \$5 |
| 14. Second best Filly 2 years old, | Medal |
| 15. Best Filly 1 year old, | \$5 |
| 16. Second best 1 year old, | Medal |
| 17. Best Brood Mare with Colt by her side, | \$10 |
| 18. Second best " " " " | Medal |
| 19. Best Brood Mare with Mule Colt by her side, | \$10 |
| 20. Second best " " " " | Medal |

SECOND CLASS—BLOOD HORSES.

- | | |
|---|-------|
| 1. For best Stallion over 4 years old, | \$20 |
| 2. 2d best " " " " | Medal |
| 3. Best Stud Colt 3 years old, | \$10 |
| 4. 2d best " " " " | Medal |
| 5. Best Colt 2 years old, | \$10 |
| 6. 2d best " " " " | Medal |
| 7. Best Colt 1 year old, | \$5 |
| 8. 2d best " " " " | Medal |
| 9. Best thorough bred Mare with Colt by her side, | \$10 |
| 10. 2d best " " " " | Medal |
| 11. Best thorough bred Mare over 4 years old, | \$10 |
| 12. 2d best " " " " | Medal |
| 13. Best Filly 3 years old, | \$10 |
| 14. 2d best " " " " | Medal |
| 15. Best Filly 2 years old, | \$5 |
| 16. 2d best " " " " | Medal |
| 17. Best Filly 1 year old, | \$5 |
| 18. 2d best " " " " | Medal |

THIRD CLASS—MORGAN OR CANADIAN.

- | | |
|------------------------------------|-------|
| 1. Best Stallion over 4 years old, | \$20 |
| 2. 2d best " " " " | Medal |

With certificate to be approved by Society.

FOURTH CLASS—GEORGIA RAISED.

- | | |
|------------------------------------|-------|
| 1. Best pair Matched Horses, | \$10 |
| 2. 2d best " " " " | Medal |
| 3. Best Single Harness Horse, | \$10 |
| 4. 2d best " " " " | Medal |
| 5. Best Saddle Horse, | \$10 |
| 6. 2d best " " " " | Medal |
| 7. Best heavy draft Horse Gelding, | \$10 |
| 8. 2d best " " " " | Medal |

FIFTH CLASS—SOUTHERN RAISED.

- | | |
|--|-------|
| 1. Best pair Matched Horses, | \$10 |
| 2. 2d best " " " " | Medal |
| 3. Best Single Harness Horse, | \$10 |
| 4. 2d best " " " " | Medal |
| 5. Best Saddle Horse, | \$10 |
| 6. 2d best " " " " | Medal |
| 7. Best pair Matched Horses—open to the world, | \$10 |

JACKS AND JENNETTES.

Imported.

- | | |
|--|-------|
| 1. For the largest and best imported Jack, with certificates, approved by the Society, | \$50 |
| 2. For the 2d best imported Jack, | Medal |

- | | |
|---|-------|
| 3. For the best imported Jennette, with certificates approved by the Society, | \$10 |
| 4. For the 2d best imported Jennette, | Medal |
| <i>Southern Raised.</i> | |
| 1. For the best and largest Jack, | \$20 |
| 2. " " " " Jennette, | 10 |
| 3. " " " " Jennette, with colt by her side (Georgia raised), | 10 |

MULES.

Georgia Raised.

- | | |
|-----------------------------------|-------|
| 1. For the best pair of Mules, | \$30 |
| 2. " " second best pair of Mules, | Medal |
| 3. " " best single Mule, | \$10 |
| 4. " " second best single Mule, | Medal |
| 5. " " best Mule 2 years old, | \$5 |
| 6. " " " " " " | 5 |

Southern Raised.

- | | |
|-----------------------------------|-------|
| 1. For the best pair of mules, | \$10 |
| 2. " " second best pair of Mules, | Medal |

DEATH OF DR. WILLIAM TERRELL.

We regret to learn, (says the *Savannah Courier*,) that Dr. WILLIAM TERRELL, well known, not only as an enlightened agriculturist, but as one of the wealthiest and most public spirited citizens of Georgia, died at his residence in Sparta, Hancock county, at half-past one o'clock, on the morning of the 4th of July. The deceased has entitled himself to the gratitude of Georgia and of posterity, by the donation of twenty thousand dollars to the Athens College, for the establishment of a Professorship of Agriculture. Called by his name, it will, for all time, be his monument. Speaking of this munificent endowment, we remarked, last January:

"It is due to the history of Agriculture as a Science in this country, that we record the fact that no other person in this great Republic has given for immediate use, to increase and diffuse rural knowledge, more than one-fourth the sum donated by the patriotic and distinguished founder of the first Professorship of Agriculture in the Southern States. A similar Professorship was established a few years since in Yale College, on the gift of \$5,000 by Mr. Norton, whose son was appointed to fill the new chair thus created. No paternal or family tie has, in any way, been associated with the munificence of Dr. Terrell. View the transaction in whatever light we may, nothing is discovered but the wish and the effort of a noble mind to arrest that tendency to impoverish the soil, which forms so striking a feature of American Agriculture."

The following letter from Dr. TERRELL, to the Trustees of the Georgia University, states, in a few words, the purpose of the endowment:

"To aid in this great enterprise," (of preserving from destruction the lands of the Southern States by bad tillage,) "if you will allow me to call it such, I propose to your honorable body to give to Franklin College, Bonds of the State to the amount of twenty thousand dollars, the annual interest of which shall be applied permanently as compensation for a Professor, whose duty it shall be to deliver, in the College, a course of lectures during its terms, on 'Agriculture as a Science; the practice and improvement of different People; on Chemistry and Geology, so far as they may be useful in Agriculture; on Manures, Analysis of Soils and on Domestic Economy, particularly referring to the Southern States;' the lectures to be free."

We have no materials from which to sketch the life of this model citizen. A native of Wilkes, when a young man he removed to Hancock county, which he repeatedly represented in the Legislature of Georgia. Later in

life he served in the Congress of the United States; and still later, in obedience to a nearly or quite unanimous call of that constituency, represented the counties of Hancock and Baldwin in the Senate of Georgia. As a man of refined taste, high mental culture, and extensive and varied information, he had few, if any, superiors in Georgia, while the qualities of his heart formed in all respects a fit counterpart to the high endowments of his head. Those who knew him best—and it is they that loved him most—will not think it too much to say, in the oft quoted words of the dramatist:

"This was the noblest Roman of them all:
His life was gentle, and the elements
So mixed in him that nature might stand up,
And say to all the world, he was a man."

The following brief note announces the painful event which has called forth the foregoing hurried and inadequate tribute:

"SPARTA, July 4, 3 A. M.

"Our much esteemed friend, Dr. Terrell, expired quietly and without a struggle this morning, at half-past one o'clock. A good and honest man is the noblest work of God. I read and prayed with him, and trust he died in the true faith."

GRASSES FOR HAY AND GRAZING.

WE cannot better introduced what we wish to say on this subject at this writing, than by publishing the following brief notes which explain themselves:

POMONA HALL, (near Clarksville,) Ga., June 5, '55.

DR. DANIEL LEE—*Dear Sir*—I enclose to you a specimen of some of my Wild Grass, cut when in bloom; it is perennial and a winter green; and I believe, the best grass for all purposes that is known. As I am no botanist and know that you take great interest in agricultural matters, will you please classify this grass and let me know its proper name and station. I have been cultivating it four years; began upon less than a thimbleful of seed, obtained from a traveller, who said he gathered it in the Rocky Mountains or Arkansas—I do not recollect which.

If you have leisure to attend to it you will greatly oblige one who appreciates your devotion to agricultural improvements.

JOHN R. STANFORD.

P. S.—A reply, direct, or through the *Southern Cultivator*, is requested.

J. R. S.

ATLANTA, GA., June 9, 1855.

DR. DANIEL LEE—*Dear Sir*—Mr. STANFORD, of Clarksville, will send you some heads of his *new* grass to classify. It is, beyond a doubt, the common "Tall Oat Grass" of England, such as is sold in all the Northern seed stores; it is identical with the *great* grass of Col. WATKINS, of Huntsville, and with my Mysterious Grass, that I showed to you in my garden several years ago. I am well pleased with this grass, and, at this time, consider it the *only* hay grass for upland that, in this climate, can be relied on to grow high enough to cut.

Respectfully yours,

R. PETERS.

P. S.—The four heads enclosed are, one from Col. WATKINS, one from Col. STANFORD, one from seed out of Northern seed stores, and one from my garden patch of Mysterious Grass.

R. P.

Mr. PETERS is right in calling the specimen furnished by Mr. STANFORD, "Tall Oat Grass," whose botanical name is *Avena elatior* L., and *Arrhenatherum avenaceum*, BEAUCH. The latter name is intended, doubtless, to com-

bine its two leading characteristics, viz: its avenous, or oat features, with its arenaceous habitat, or sand-loving habitation. These facts are not unworthy of note, as favoring the hope that it may be constitutionally adapted to the soil and climate of no inconsiderable part of the Southern States.

Mr. PETERS being earnestly engaged in the breeding, grazing and wintering of fine neat stock, his opinion on the economical value of this grass for hay and pasturage, is entitled to great weight. It is not unknown in the middle and Northern States; and it is there esteemed somewhat too coarse for making the first quality of hay.

We are inclined to believe that there are a number of varieties, and perhaps distinct species, of *avenas* growing wild in this country. Dr. GRAY says the *Avena elatior* was introduced from Europe; which Dr. DEWEY, (high authority) "doubts, as it is found in such situations in our own country." Meaning in places where nature, not man, had planted it. Professor GRAY says it is absurdly called "Grass of the Andes."

Perhaps so; but the association may have some value, nevertheless. As three and a half centuries have elapsed since COLUMBUS discovered this continent, and emigrants from Europe began to bring seeds from the Old World to the New, it is no easy task to say with certainty what plants have been introduced, acclimated, and become wild in this country, and what are indigenous, in many cases. Dr. DEWEY suggests the possibility of the introduction of this grass into South America and New Mexico from Spain. He says it is not mentioned among SINCLAIR'S English Grasses, as cultivated in England; while in MEULENBURG'S *Graminae*, it is said to be cultivated in New England and Pennsylvania.

If a grass, either identical with this, or similar to it in habit and nature, flourishes in the South of Europe, the fact increases the chances of its doing well in the cotton-growing States. Its coarseness and harshness, when grown on rich land, may be softened by thick seeding, and early cutting for hay. This we recommend where one does not care to save the seed of his crop.

We do not wish to criticise the remarks of any of the writers for the *Cultivator*, on grasses; but that some of them are too sanguine we have no doubt. It is truly a noble field for Experiment; and no one should jeopard his reputation, or damage an important interest by hasty, or exaggerated statements. Time, patience and perseverance will develop the best grasses for the South. Our object is to keep the subject constantly before the public; for these flesh and manure-forming, these milk and wool-producing plants, are invaluable to agriculture.

In travelling North, we no sooner reached the mail districts, near Petersburg, in Virginia, and passed on over the artificially limed farms and lime-stone lands in Maryland, Delaware, Pennsylvania, New Jersey and New York, than we became again deeply impressed with the essential value of the calcareous element in the production of cereals, and all other grasses. The difference between the grass, both in quantity and quality, grown on an acre in Monroe county, New York, and Clark county, Georgia, is wonderful. Five thousand of KETCHUM'S Mowing Machines will be manufactured in Buffalo this year, and sold to farmers at a cost of more than five hundred thousand dollars. A few days since the writer was present where there were assembled nearly two thousand farmers to witness the trial of six or eight different machines of this kind. MANNY'S Reaper and Mower, made at Hoosic Falls, New York, and KETCHUM'S, above referred to, operated the best. Farm labor is so high and scarce, that agriculturists buy labor-saving machines with uncommon avidity. The harvesting of grain and hay in all countries where these staples are extensively grown, is an important operation. A good machine cuts from ten to fifteen acres.

in a day, and is worked by two horses and a driver. The price is \$105.

In forming good meadows and pastures at the South, we cannot too earnestly press upon our readers the necessity of making the land rich with manure, or the free use of ashes and lime. There are several well known grasses which yield profitable returns on strong fertile soils; while really poor lands never produce grass crops of any considerable value. At the present prices of horses, mules, and neat stock of the best quality, good grazing land is worth \$100 per acre; and not a little in New York pays the interest of \$200 per acre. Even in the cool climate of England and Scotland, 100 tons of green grass, (Italian Rye grass,) have been cut from an acre in a year. Liberal manuring will give a remunerating crop where the want of it will ensure a signal failure. Southern farmers must cease to let their stock drop so much of their manure in woods and old unenclosed fields, before they can fairly begin to make choice meadows and pastures of cultivated grasses. In rich limestone districts, this improvidence may exist with less apparent injury; but in all sections where the soil is comparatively poor, a better system of husbandry is indispensable. The New England plan of having cellars to stables and barns for storing manure, and to keep it out of all rains and snows, and covered with muck or loam, to prevent loss of ammonia, is worthy of universal adoption. It is quite as easy to make a profitable crop of grass with manure, as a profitable crop of manure with grass. Some may say that neither of these crops is worth having; and it is precisely the sinister influence of this feeling which has done most to desolate the planting States. But a few wish to see here and there an oasis—rich pastures of living green, and sweet, delicious meadows, with fat, deep red Devons to match.

L.

CALIFORNIA BARLEY.

EDITORS SOUTHERN CULTIVATOR—Enclosed, I hand you a specimen, including a few ears, of naked barley, (known to botanists as *Hordeum Gymnodis tickum*) introduced into this country from California, and grown by Mr. E. T. SHEPARD, of this city, the past season.

It is, as you will perceive, of the two rowed variety, with exceeding long awns. Its weight, I should suppose, would nearly equal the best wheat.

Mr. S. informs me that this specimen is not so full and plump as the seed sown. This might be attributed to the dry season under which it has matured, and not the climate, as barley will accommodate itself to most any climate. We know it grows well in Europe. This species is not so highly regarded in Europe as the six rowed, (naked) so much esteemed there for its fertility and productiveness, and also for making bread, and for pearl barley; but I cannot well imagine a superior grain of this genus. It is said by some French writers to produce twenty-four to one in mountainous countries.

Mr. S. seeded down two acres of this grain, but as the seed was much weevil eaten, the stand was very imperfect. Soil silicious, dry nature, (pine land.)

Barley is not, as you know, entirely exempt from diseases, such as smut, blight, &c., but not so liable as wheat. It is more subject to be injured by wet weather, when in head, than the latter. Of nutritive matter it is said to contain 65 per cent., and wheat 73 per cent.

If you think this species worthy of being grown in the South, please give us a few thoughts upon the subject.

Yours, very respectfully, B. A. SORSEY.

Columbus, Ga., June, 1855.

REMARKS.—Mr. SORSEY has our thanks for calling our attention and that of the public to this recently introduced

species of barley. That it is worthy of trial at the South is beyond question; for any kind of this grain, in skilful hands, rarely fails to give a good profit. In former years, when we had a limestone farm, there was no other crop that gave us so cheap pork, and cheap horse-feed as barley. For hogs, our practice has been to grind and cook this kind of grain; for horses, it is ground, and the meal mixed with wet, chopped hay or straw.

Barley is easily mown with a grass-cutting machine, raked with a horse-rake, and is also easily threshed and cleansed by horse power. The farmers of New York raise about half of all the barley grown in the United States, according to the census returns. It delights in a rich soil, and we should never attempt to raise it in any other, without a liberal dressing of manure. With good farmers, fifty bushels per acre is about the average yield. Cut early, speedily cured, and well housed, the straw of this grain answers as a substitute for hay in wintering stock. The slovenly neglect of wheat straw, and the abundance of poor cattle which may be seen in some parts of the country, are not credible to American agriculture. A plenty of good forage, will keep stock in a growing condition all winter, give the family an abundance of milk and butter, and the farm an additional supply of manure in the spring. Boiled barley, without grinding it, makes capital feed for horses, mules, hogs, fattening cattle and sheep. Some of our friends in New York coin money by making fat sheep fed on boiled barley and oats. Of course, this furnishes much fat manure.

L.

CROPS IN JEFFERSON COUNTY, GA.—“A Subscriber” writes us from Jefferson county, under date of July 5:

EDITORS SOUTHERN CULTIVATOR—The crops in this section of the State were never more promising. If the seasons continue the present month as they have been, the harvest for corn will truly be great.

MANAGEMENT OF NEGROES.—A subscriber in Mississippi, writes us as follows:

“I would recommend ‘AGRICOLA’S’ Management of Negroes,” in the June number of the *Cultivator*, as the best I have ever seen; and would amend only by releasing them from packing cotton at night, requiring them invariably to take breakfast before going to work, and giving them another good dinner when the crop is laid by.

J. N. L. S.

A WORD FOR LARGE MULES.

In opposition to the views of Mr. COCKERILL, of Tenn. (as heretofore published,) we have the following from ALFRED COHEN, of Kentucky. Our own taste runs entirely with the former gentleman, in favor of medium sized, active, well-formed animals, but we desire that both sides of the question may be presented. We quote from a late number of the *Louisville Journal*:

Mr. Cockerill's views as regards the symmetry, spirit, action, and stamina necessary for a good and serviceable mule are correct. I am myself a mule raiser, and have also driven mules for a number of years to the several Southern States, and use them also on my farm for the different agricultural purposes. Although I do not number quite as many teams as Mr. Cockerill, still from the

quantity I have handled, in different ways, I may consider myself a *judge*. Never before have I heard the superiority of the Tennessee jacks and mules claimed over the Kentucky stock of that kind.

Mr. Cockerill says that we force our jacks and mules, by a hot-bed growth, to be large animals—that we take size only into consideration, and, owing to our treatment we have large, coarse animals, without spirit, action, or stamina: hence, according to Mr. C., the Tennessee jacks and mules are more valuable and serviceable than the produce of Kentucky, under her present system. Now, it is well known all over the United States, where mules are used and sold, and the stock of Tennessee as well as other States comes in competition with Kentucky, that the Kentucky mules always command the highest prices, for their superior size, symmetry, style, and action. It is also known that Tennessee drovers, when in the Southern markets, frequently say that their mules were purchased in Kentucky, for the purpose of giving them reputation. So much for the Kentucky name. It is also well known that the best jacks they have in Tennessee were raised in Kentucky, and we never sell our best jacks out of the State; and, as far as our brood mares are concerned, their superiority is so generally acknowledged that it is not necessary for me to proclaim their merits.

I know very well that many years ago, when we first began to raise mules, an error prevailed here as regarded the qualities necessary for a good mule. Then they were generally judged by their size, and the largest mule commanded the highest price; but we have learned by experience that style, symmetry, action, and stamina are now taken more into consideration than size, although we still have in Kentucky mules from 16 to 17 hands high with as much style and action as a small mule can have; and, as a sample of what Kentucky can do in that line, a pair of mules may now be seen in New York, which were sold to a gentleman of that city by Mr. Gabriel Salter, of Garrard county, for \$1,000. They are over 17 hands high, and have all the style and action of fine horses.

I suppose that Mr. Cockerill never was in Kentucky, for otherwise, from the experience and judgment he says he has in that kind of stock, I think he never would have underrated our stock in the manner he has. If he wishes to be undeceived in relation to our jacks and mules, if he will visit Kentucky in the fall and attend some of our county fairs, I believe he will not only reverse his opinion, but consider himself amply repaid for his trouble.

It is well known that in the heavy lowlands of the South, experience has proved that they require large mules that can throw weight in the collar, to till their lands, provided they have the action to sustain their weight. Large mules are also required to work on the canals in the North, they being found more serviceable than horses. They are also required for the drays in the city.

In fact, all over the South the planters have now discovered by experience that the large mules are the most serviceable; and it is difficult at present for our drovers to sell small mules anywhere.

Cattle, horses, mules, and all other stock are generally well treated in Kentucky. Without good treatment we cannot expect to have good stock. We are enabled to treat our stock so well, owing to the luxuriance of our bluegrass pastures—the best grass for stock—which, from our latitude, soil, and climate, has so far done better here than in any other State. This species of grass has been tried in Tennessee, but it is too far south for it to do well—it does not sod there as it does here, and it always turns up during their long, dry, hot summer days.

Forty poles of 30.25 square yards each is a rood. And a pole is 5 yards and a half each way.

SUGGESTIONS ABOUT STATE FAIRS.

As the season is approaching when the various State Agricultural Societies are to hold their Annual Exhibitions, the attention of officers and members, and of the agricultural community generally, is very properly directed to the subject of the proposed or anticipated management and display on such occasions. The times and places of holding the principal Fairs having been designated and announced, those chiefly interested—the Farmers, Horticulturists and Mechanics who purpose attending either as exhibitors or spectators—naturally desire to ascertain as to the prominent features, and what new attractions, if any, are to be introduced. Hence, not only the Premium Lists and Regulations will be examined carefully, but many will look confidently for novelties and improvements in the detailed programme of each exhibition, and that Society which shall combine the desired items and elements in the best manner, will, other things being auspicious, render its show the most attractive and successful.

But, says the reader, novelties and attractions are not indispensable; for people who desire to make money, secure premiums, or advertise, or procure animals, machinery, &c., need no such inducement. Aye, the class mentioned will be there—but, unfortunately for the success of the Society, and the cause of improvement, it is limited in number, though quite influential. The great mass—the upper ten hundred thousand, if you please—are prompted to attend by other and very different motives. Many, perhaps the great majority, are induced to attend State Fairs from the promptings of fancy—a desire to see and hear new, strange and curious things—and hence the more attractive the programme, the greater the interest manifested in advance of the show, and the larger the attendance. The apparent disposition of many to seek amusement, and make simply holiday affairs of our large shows, is not over-commendable we are aware, yet there seems to be a necessity for it in the tastes and inclinations of the American people. Not but what we are sufficiently practical and utilitarian, for the contrary is proved by our most prominent national characteristics. But there is at least one cogent reason why our State Exhibition are, and will continue to be, resorted to by thousands for amusement and recreation. We have too few holidays. With the exception of Independence—the ever-glorious 4th—we, as a nation, have scarcely a day which is universally celebrated as a holiday. True, Christmas and New Year are holidays in our almanac, but they are not appropriately or generally celebrated by the great mass of the community.

Now, we may mistake the public inclination and sentiment, yet the experience of the past indicates the necessity of adding novelties and improvements, each year, to the programme of our own State Society's Exhibition. True, we cannot make a holiday which shall be universal throughout the State—for only tens of thousands, instead of hundreds of thousands, will be participants. The county and town Fairs will, however, afford the masses who cannot attend the State Show a convenient opportunity for useful and pleasurable recreation. We are convinced that the more novelty and amusement can be united with the useful and instructive features of all our Fairs—State, County and Town—the greater will be their success, and the more universal the benefit and satisfaction to community. Let us, therefore, have a holiday, or Rural Jubilee, on the occasion of every State Fair—appropriately celebrating and commemorating the bountiful harvests gathered, and rejoicing in the progress of Ruralists in wealth and intelli-

* This is only true of the Northern and Eastern States. Among us of the South, the Christmas holidays are "high carnival" for both white and black.—Eds.

gence—thus combining amusement and pleasure with the useful and instructive information derivable from the practical features of the exhibition.

But while we would favor the introduction of novel and attractive features, we should oppose any diminution in the useful and instructive departments. On the contrary, we should urge increased attention and display in those branches of production and performance which are most novel, striking and instructive. The more general operation and trial of recent inventions and improvements in the department of Agricultural Machinery, &c., would, among other things, add materially to the interest of the occasion. And if arrangements could be made for discussions of practical subjects, during each evening of the Fair, the meetings would not only prove attractive but eminently beneficial. Instead of having simply an address or speech from some eminent politician or statesman, who would probably exalt every farmer in the land to the proud position of a Cincinnatus or a Washington, and talk profoundly of the duties of Congress toward the Agricultural interest, yet rarely vote for its promotion—let us have discussions by practical and experienced men, on the leading branches and operations of Agriculture. Discussions on such subjects as the Improvements of Stock, Grain Growing, the Dairy, Underdraining, Fruit Culture, &c., would, we are confident, prove both interesting and profitable to thousands who attend our State exhibitions. Let it only be understood that such topics are to be discussed—that able and practical men are to preside and open the discussions—and there can be no doubt as to the result. We are aware that something has been attempted in this matter already, but not in a systematic manner. The discussions ought to be announced in the Society's programme, and the arrangements assigned to certain officers or a committee.

This whole subject is one of primary importance to the officers of our State Agricultural Societies and the friends of improvement generally, and if our crude suggestions are not exactly to the point, we trust they may induce those more experienced to give the matter consideration.—*Rural New Yorker.*

HOW TO HAVE WEAKLY CHILDREN.

1st. Wrap them up in an abundance of flannel and other warm clothing. Make their clothes to fit neatly, and draw them tight about the shoulders, chest and waist.

2d. Keep them in doors as much as possible. Never allow them to run out and romp about in the open air, as this would promote digestion and excite a more healthful circulation of the blood, and thereby tend to defeat the object.

3d. Allow them to eat anything they want except corn bread, bacon and beans, and other similar articles of coarse food. Always keep a supply of sweetmeats and all sorts of nicknacks on hand, and never let them be without something to eat more than half an hour. If they do not incline to eat so often, encourage them to do so by offering them something else.

4th. Never wash them in cold water.

5th. Put them to sleep in warm feather beds—no matter how many together—the more the better. Cover them up with warm blankets and quilts, and close all the doors and windows, both winter and summer.

6th. As they will frequently exhibit signs of illness, give them a dose of vermifuge and encourage them to eat.

7th. When your daughters have attained the age of five or six it is time to apply the whalebone, starch, &c., so as to compress the lungs within the smallest possible compass, and an additional skirt or two should be suspended from the waist.

They should now be provided with a bottle of snuff,

and carefully instructed in the art of indulging in that very fashionable luxury called "*dipping*."

By the strict observance of these, and other similar rules which will naturally suggest themselves, your children will speedily become dyspeptic; their teeth will decay and fall out, and you will have the satisfaction of seeing them grow up most beautifully delicate; and not more, perhaps, than four out of six will die of consumption before they are thirty!

Tucupola, Miss., June, 1855.

QMO.

REMARKS.—The author of the foregoing, (who is a regular physician,) in a note to the Editors, says:—

"I am aware that your journal is scarcely the proper medium for communications of the character of some that I have sent you, and yet I know none more so. I wish to give the people a few hints concerning various errors in their mode of living, but if I publish them in medical journals 'nobody' but professional men will ever see them." * * * "The object of your journal is to promote the prosperity and happiness of your fellow beings. Well, no one can be happy without health.—*Cotton is not everything.*"

THE SEASON IN MISSISSIPPI.

EDITORS SOUTHERN CULTIVATOR.—The long drouth has bid us adieu! The very interesting ceremony took place on the evening before last, after having, for several days, been marshaling forces by his opponents to expel him from the land. Several hard fought and brilliant skirmishes took place, in which both parties fought valiantly and with various success, until the evening before last, a grand assault was made by the besiegers to storm the works. The line of battle was drawn up—the right wing resting on the north west! the left extending to the southeast, probably resting upon the "Queen of the Antilles"—the order was then given forward! arms at a support, when the enemy gave way and was driven completely from the "Field," without the firing of a shot! The victory was as complete as it was decisive. And now the late prisoners, held so long in duance vile, who had been placed on short allowance, although lean and haggard, seem to be full of life and buoyancy and hope.

Well, Cotton looks well; Corn frightfully small, but will prove to be so much better than was promised a few days since, that we apprehend no danger of famine the next year, in this portion of the staple State. P.

Yazoo County, Miss., June 25, 1855.

HOMES FOR THE PEOPLE, IN SUBURB AND COUNTRY.

THE Villa, the Mansion and the Cottage, adapted to American climate and wants; with examples, showing how to alter and remodel old buildings. In a series of one hundred original designs. By Gervase Wheeler, architect, author of *Rural Homes*, etc. Charles Scribner, 145 Nassau street, New York.

A year ago, the present volume was announced, and when just ready for publication, the disastrous fire that swept away so many printers' buildings in Spruce street, destroyed the whole of the work; and, by a fatal mischance, the author's manuscript was in the printing office, and so the entire fruit of brain and hand labor was in a few hours, consumed. Manfully the author set to work to re-write the book, and the present volume is the result. A previous acquaintance with the power of Mr. Wheeler's pen and pencil, led us to anticipate, in the work before us, an excellence of no common order; and we can hardly do justice to the purity of the language in which ideas, novel and most beautiful, are clothed, nor sufficiently extol the illustrations of the various designs.

In this day of "house-founding," scarcely a man but

must need advice and models, such as this volume affords; and we consequently commend the successful efforts of the author, and wish the book a sale as extended as it deserves.

It is curious to see how, in architecture as in other matters, extremes meet. The cot of the humble laborer, inspired some faithful lover of the picturesque to build a home like the ideal of a cottage externally, but plentifully provided within with all those et cetera that go to make life comfortable and luxurious. Years ago, it was the fashion so to build; and all over Europe, at one time, the fancy spread of seeking to exhibit, in the most whimsical manner, how, with a semblance of cottage form, palace habits could be accommodated in a building. Wealthy men vied with each other in building such little toy-houses; to be pleased in for one season, and then abandoned to damp and spiders and rapid decay from the next. At this time was the rage for fancy dairies, ornamental houses, and all the occupations of the farm were sought to be sentimentalized; but the followers of this fashion soon grew weary of it, and, like other follies, it had its day.

But out of all this, good resulted. Attention was drawn to the possibility, even in farm belongings, of combining utility with beauty, and farm-life became less rude, and its more elevating influences sedulously cultivated. The whimsical erections, too, gave birth to a happy irregularity and picturesqueness of building, immeasurably an improvement on the square brick house, that before seemed the only form in which the residence for those occupying the middle rank in life could be cast.

Perhaps no country can show results so happy in this desire to accommodate frugality of life with elegance of manner, as can England, in the small suburban and rural residences which receive the name of the Cottage Ornee.

The people have profited by the costly experience of past generations, and, whilst one never sees erected now a perfect bijou of a small villa like that of the Duke of Devonshire—which Horace Walpole found fault with, as being "too small to live in, and too large to hang to one's watch chain," though the caustic writer afterwards exhibited, in his own "Strawberry Hill," how much easier it is to criticize than to excel—houses better adapted to every-day life, and at the same time exceedingly pretty and rustic in their character, plentifully abound. Sometimes there is, it is true, too great an affection of the cot about such suburban buildings, particularly when belonging to a wealthy man of many homes; and a passer-by is reminded of the cottage spoken of in the witty satire, where the Devil quizzes such an one (described) as

"A cottage with a double coach house—

A cottage of gentility;

And the devil did grin; for his favorite sin

Is the pride that apes humility."

Such buildings, however, were the type of a class of houses that dots everywhere the pleasantly-living places of beautiful England. Many a shady lane reveals in its windings, glimpses of such homes, and the combination they present of comeliness and comfort may very advantageously be studied. In this country, a want, rapidly growing in its imperativeness, is being experienced of just such homes. Country life tempts so many from the cities to spend at least a portion of the year with their families in rural retreats, that inquiry is awakened as to the best mode to adopt to secure an inexpensive yet enjoyable home, to be lived in during summer, and, perhaps, left to the charge of those that tend the little farm holding attached to it, during the season of the year that city residence is intended.

This home, thus needed, differs materially from the villa or the mansion, and has requirements, too, that seek embodiment in other forms than will be found in the farmhouse or farm-cottage.

The family seeking such a home, it is supposed, require one for temporary or protracted residence, at will; it must not be a mere shell or tent, as it were a shelter for a few weeks or months in the season, as cottages at our fashionable watering-places are, nor yet are all the belongings of a permanent home thought necessary, although the plan should so be contrived that the house of the summer may readily be made the family homestead for life; and it is in this facility of after-adaptation and enlargement that the class of house now under consideration possesses advantages so charming and desirable.

Sometimes a summer-house is wanted of but limited accommodation; gentlemen fond of rural sports now and then are tempted to build such a little lodge amid beautiful scenery, where fishing or hunting may abound. The loveliness of the place may tempt the family to join in the occasional excursions made for such purposes; and, although these buildings are not so frequently to be met with here as in Europe, a want has, now and then, been expressed for such a little sporting cottage; and the first design in this section will exhibit a plan suitable for erection.

The artist, too, often needs such an abiding-place in which to spend his summer days, and gather lessons from the open book of nature, and in my professional practice I have more than once been called upon to furnish such a design.

Now and then appears an illustration of such a building in the serials, or other works that touch upon architectural matters; but I have scarcely examined one such design that was not too dreamy and unlivable for the purpose it professed to fill.

The excellence of such a building should be absolute economy in construction and plan, and adaptation to material that can be used with greatest facility. With these an appropriate harmony with the surrounding scenery should be sought, but there should be little embellishment that would cause difficulty of workmanship to the mountain laborers that the builder will be able to employ, and the material and mode of using it should be such as the neighborhood most naturally suggests.

The log house may be made a most comfortable and picturesque building for such a purpose, and the manner of thus constructing it would scarcely interfere with almost any ground plan that convenience led the owner to adopt.

Where stone abounds, a rough wall may cheaply and quickly be built, and of this material a very beautiful construction can be made. In fact, although the indweller as supposed to be a man of cultivated and refined taste, the out-door surroundings are imagined to be wild and artificial, such as naturally would be in those localities that a sportsman or artist would be likely to select as a place for summer sojourn. Yet no rudeness of life is intended—but only that simplicity that he finds play in the country; and so, though plainly built and furnished, the cottage should be fitted in its plan, and in the decent provision for domestic convenience that it makes, for occupancy by the same owner, that elsewhere would require all the surroundings of refinement and artificial finish.

On the sides of a noble mount in, whose base dips to the waves of a broad river, and whose garb of verdure deck the sides to the upmost peak of its rocky crown, a winding road elicits, with frequent breaks, from a valley that one of the rolling sides of the mountain forms in intersection with the base of another of the range; and girdling the sloping sides, passes along through other mountain gorges and little valleys, until it is lost in the windings of its distant course. This road is not of much travel—it leads from one little hamlet, supported by the scant business produced by the saw-mills, that the tributary streams flowing into the river feed, to another a few miles distant.

On this hill-side a spot is fixed upon to build a little summer-house. The air of the neighborhood is proverbially healthy; the scenery of a grandeur and changing freshness that the world elsewhere cannot surpass—and a few farmers in the vicinity constitute just so much of a neighborhood as to make a man feel he is not entirely alone, and can depend upon a friendly hand for kindly help at need, and the woods and waters abound with all that can contribute to a sportsman's enjoyment.

Not far from the site where the house is to be, is a farm cottage, and a barn, and other outbuildings, all in somewhat of a primitive style of finish; and at hand is a spot of cleared land, sufficient to support the inmates and their farming stock. Back in the woods and on the fertile margins of the mountain streams, the cattle find a constant pasturage, and with the aid of such expenditure as the owner of the place upon which this tenant house stands, makes at times upon the land, the farmer contrives to gather a comfortable livelihood, and to provide the inmates of the summer-house with all that they require for their table supply. This is no fancy sketch—and there are many such places scattered about the country, where homes such as I am about to describe may cheaply be built.

The sides of the mountain abound with a soft, shaly stone, easily worked if cut in one direction, but splitting into laminae if severed in line with its bed. This stone makes a good wall, and can be found in natural slabs, that but little labor serves to convert into lintels and sills of any requisite thickness, for the stone readily divides in vertical lines parallel with its bed, but is very difficult to cut across. Thus the walls can be laid in courses of as close a regularity as may be wished, the stones placed in the natural direction of their bed, forming a strong and compact mode of masonry. Such walls need no pointing, and are exceedingly rural in their appearance, and as durable as the mountain itself. In constructing them, however, it is not desirable to carry them to any very great height—and it is well known that the ratio of cost of building such stone walls, and, indeed, all walls, very rapidly increases as the building advances in elevation. So a cottage, with the outer walls as low as convenience will permit, is desirable for the locality in view. But too extreme a lowness does not permit comfortable rooms, or healthful arrangement of the interior; therefore, some manner of adding to this height is to be sought for, and may be found hinted in many old buildings in Europe, where the upper stories overhang the lower, and the walls are built above the masonry, of timber, filled in with cement or other light material.

The summer-house that is designed to suit the mountain site that has been sketched, has, therefore, all these requirements to fulfil, and the following illustrations will show the reader the manner in which it has been done.

The building stands upon a small triangular terrace, level upon the top, and forming a step in the downward bend of the mountain side. The road that has been described skirts it upon one side, and branching from this is a by-lane which leads to the farmer's cottage previously alluded to, passing on the way the small stable, kennel, and other outbuildings belonging to the summer-house. The aspect of the place is such that the travelled road is in the rear, and the private lane branches at a point below the side of the mountain immediately in front of the house—but upon a lower level, and consequently screened from sight. The outbuildings are, therefore, lower down the mountain, but are concealed by trees and rocky elevations from view.

Thus placed, the whole of the building is exposed to view—the public road traversing the rear, and the sunny and pleasant exposure being in front of the house. A careful arrangement of the plan, so as to afford all the convenient comfort in living requires to be attached to

the house—and at the same time present not too free an exposure to public view, thus becomes essential.

The plan, therefore, is disposed as follows:—The road is in the rear, and a wagon-drive leads from it at one point, loops round the house, and returns again to the main road—previously, however, touching within a few yards of the lane leading to the stable, and affording connection between the two, by a short road from one to the other. To render the plan more intelligible, it is represented as upon the ground, the rear towards the road, and thus agreeing with the perspective sketch of the exterior presented as following.

The above portion is taken from chapter six, "The Cottage," and is a graceful example of the author's pleasant and easy manner of imparting what, with less skilful management, would prove very dry and uninteresting facts. The illustrations accompanying the chapter are beautifully adapted to the idea sought to be conveyed, and make one long to seek such a mountain-side and summer-house forthwith.—*Home Journal*.

CARE OF HORSES.—Some people never or very seldom clean their horses, and pay for it at a dear rate. Some men will keep a team all winter and drive them about one-quarter of the time, but never clean them unless to get off the thickest of the dirt. They never rub down the legs of their horses, as they ought, to keep them from swelling by standing in the stable. Folks talk about their horses being stiff and foundered; if they would feed them more, and drive them slower, and clean them neatly, they would not complain of stiffness. Let a man use a curry-comb, card and brushes, as he ought to, and he will not envy other people's slick horses. Some persons never comb out a horse's mane or tail; they complain that it pulls out the hair, but keep them combed out all the while, and you won't lose much hair; this will make it grow out thick.

I don't pretend to say that this, without feed, will do much towards keeping a horse decent. There has been and is a great deal of cut feed fed to horses, and is very good feed if used right but a horse will not keep fat on a bushel of straw and four quarts of shorts a day, with a little hay. The way we feed our horses, is a bushel of oat straw with a peck of shorts and corn meal twice a day; and when we work them, we feed them grain at noon, besides hay. This, with a good cleaning daily, makes them look like mahogany pigs. "Don't ever expect to keep a horse fat at a straw stack all winter."—*Wool Grower*.

VIRTUE, THE FRIEND OF HEALTH.—"The mind has a mighty influence upon the body, and operates either way, according to the qualities of reflection. The disorders of passion or guilt, inflame a distemper, envenom a wound, and boil up the blood to a fever. They often baffle the virtue of drugs and the prescriptions of art. On the other hand, when the review pleases, when we can look backward and forward with delight—to be thus satisfied and composed is almost a cure of itself. 'Tis true, a good conscience won't make a man immortal. But yet the quiet of his mind often keeps him from wearing out so fast. It smoothes his passage to the other world, and makes him slide into the grave by a more gentle and insensible motion. And when the body is shaken with diseases, when it bends under time and accident, and appears just sinking into ruin, 'tis sometimes strangely supported from within. The man is propped up by the strength of thought, and lives upon the cheerfulness and vigor of his spirit."

THE USE OF LEAVES.

THE office and utility of leaves are becoming better understood by cultivators than formerly; yet we find a good many still adhering to the old belief that the sun's rays, directly shining and forming fruit, are what perfect it, independently of other influences.

On this subject, theory and practice have been invariably found in perfect accordance with each other. The principles of physiology teach us the sap of a tree, when it passes in at the roots, remains nearly unchanged in its upward progress through stem and branches, until it reaches the leaves where, being spread out in those thin organs to light and air, it undergoes a complete change, and thus becomes suited to the formation of new wood and new fruit.

Strip a rapidly growing tree of its leaves at midsummer, and from that moment the supply of new wood ceases, and it will grow no more till new leaves are formed; and if it has young fruit, the growth and maturity of the latter will cease in the same way. A few years since, a yellow gage plum tree lost all its foliage from leaf blight, when the plums were not fully grown, and while yet destitute of flavor. The fruit remained stationary and unaltered, until, within a few weeks, a second crop of leaves came out. They then swelled to full size, received their crimson dots, and assumed their honeyed sweetness of flavor.

The object of pruning should be, therefore, to allow the leaves to grow to full size without being injured from crowding.

We find the following corroborative fact in a late number of the *New England Farmer*:

"We once knew an intelligent lady and one who understood much about horticulture, strip her grape vines of a portion of their leaves, in order to let in the sun and ripen the fruit; but to her surprise, where the leaves remained as Nature had dispersed them, the grapes were the earliest, and every way the best. This led her to investigate the matter, when she was delighted to learn that the leaves were not only the protectors, but the caterers of the fruit, constantly elaborating and supplying it with the pabulum it required to bring it to perfection.—*Country Gentleman*.

WE clip the following rhapsody on Roses from a late number of the *Macon Georgia Citizen*. The varieties mentioned are all noted for their beauty and fragrance, and should have a place in the collection of every amateur:

MR. NELSON'S ROSES.

We have on our table before us, so gorgeous a display of those fair creations, that we cannot forgo the pleasure of a short word with them ere they go to greet the eyes of the beautiful one for whom they were gathered. In all climes and in all ages the Rose has been the most admired of flowers. Its very name has a charm in it; and though it might, by any other name, smell as sweet, by none other could it sound half so soft and beautiful. No where but in Persia does it bloom in greater perfection, or flourish more luxuriantly than in the "Sunny South." In vain does one look in the *Royal* or other gardens of Europe, except in Italy, for such Roses as Mr. Nelson grows at Troup Hill Nursery. Though the cold and drouth have been exceedingly unfavorable to their development, yet, in a few days, they will present a scene no lover of the beautiful should fail to witness. The heart that is not touched and softened by the contemplation of such an array of Nature's floral gems, must be hard indeed. What more fitting tribute can be offered, at the shrine of beauty and loveliness, than a bouquet of the *Queen of Flowers*?

But we must proceed to the chat with our Roses, ere the fresh blush of Nature fades from their bright petals. Alas, for the briefness of Beauty in this dull, rude world! Even

whilst we gaze upon it and admire, it dims and fades away!

Most conspicuous in our group is the magnificent *Souvenir de la Malmaison*, with a face as delicately beautiful and softly tinted as the full orb'd moon rising through those light mists that float about the horizon of a calm summer sea. Its enormous flowers, its gorgeous buds, and its luxuriant foliage entitle it to the appellation of the *Queen of Roses*. One who has only seen this noble flower on a slight stem in a Northern green-house, about the circumference of a silver dollar, would fail to recognize the same in those mammoth productions of Troup Hill.

Next in superbness, is the beautiful *Devonensis*, with perfume as deliciously sweet as the scented gales of Araby. Of a light pink color, tinged with buff, its petals of a soft delicate texture, and of an elegant form, few roses possess more attractions than that which honors the Earl of Devon. Its buds are unsurpassed in beauty, and its foliage is rich and luxuriant.

Somewhat resembling the last is the *Triomphe de Luxembourg*, curious for its coriaceous petals, and beautiful for its pale, rosy tints shaded with light buff.

Scattered through our cluster is the *Arch Duke Charles*, remarkable for its endless variety of shades and tints, no two roses being exactly of the same hue, nor any two parts of the same flower. Passing through all shades from the deepest crimson to the palest pink, and variegated with clouded spots and marbled veins, they would form a beautiful bouquet by themselves.

Beautiful *Moss Rose* buds nestle sweetly in the group, and the *Duchess of Kent*, with its light pink, and cream-colored centre smiles coyly upon the *Giant of Battles*. *Queen Victoria* hugs close to *Prince Albert*, and *Comte Robinski* kisses the blushing cheeks of *Madam Desprez*. The beautiful *Hermosa* clasps tenderly the frail *Enfant d' Ajaccio*, and the *Princess Clementine* looks lovingly upon the proud *Edouard Desfosses*.

But we are falling into a tender mood. The blushing petals, and white buds of our gorgeous bouquet are so like the beauty and the purity of another "fairer flower," that we almost fancied a pair of soft eyes peering upon us from out that group of fairy forms.

We can only mention the names of the rest. We have the *Madam Breon*, the *Acidalie*, *Lavinia*, *Costa Javne Desprez*, *Madam Bossanquet*, *Abricote*, *Virginie*, *Saffrano*, *Solfatara*, *Lamarque*, *La Sylphide*, *Princesse Maria*, *Triomphe de la Dacherie*, with its reflexed petals, and beautifully starred centre.

Mr. Nelson has over two hundred different kinds of roses, embracing all the best varieties known to floriculture, and no one can look upon them in their prime, without emotions of delight. For his industry and enthusiasm in the beautiful department to which he is devoted, and for the improvements he is introducing in Horticulture, in Agriculture, and in our general taste for the beauties of the Garden and the Conservatory, he deserves much of Georgia and the South. A love for flowers begets a love for all else that is good and beautiful, and no man's life can be altogether bad, surrounded by those blooming "stars of earth."

L.

INQUIRY—WORMS IN HORSES.

EDITORS SOUTHERN CULTIVATOR—I have a valuable horse that is subject to worms at times, and it reduces him to a mere skeleton, notwithstanding I feed him well, and he has a good appetite.

These worms appear to be of a whitish color, about as large as a common size broom-straw, and about one inch long. Will you or some of your correspondents give us a remedy through the *Cultivator*, for the benefit of others as well as myself?

CURIO.

July, 1855.

Horticultural Department.

WORK FOR THE MONTH—(AUGUST.)

[AUGUST was originally called by the Romans, *Sextilis* or the sixth month; which was afterwards, by the Senate, changed to *Augustus*, in honor of the Emperor. It corresponds to the Jewish *Elul*, (Neh. vi. 15,) their *twelfth civil*, and *sixth sacred* month. By the Saxons it was called the Barn-month, or *Barn-month*, in allusion to the putting in of their harvests, and also *Thrida-litha*, or the *Third-mild-month*]

THE PLANTATION.

Cotton.—Where this crop is backward, keep your plows, cultivators and sweeps going briskly, to destroy the weeds, encourage a late growth, and prevent the falling of the forms. Towards the latter part of the month, begin your preparations for picking, and as soon as the bolls begin to open freely, set the hands at work gathering. Have all seed cotton hauled in wagons from distant fields to the gin-house, and do not require your negroes to waste their time and strength in carrying heavy baskets. If you wish to weigh the picking of each hand, it can be done by the overseer before it is put into the wagons, or each "hand" can mark his baskets and have it weighed at noon and night, at the gin-house.

Corn.—All early planted Corn is already laid by, in most sections; but very late fields may yet receive another careful working, and be finished with the surface open, mellow and free from weeds.

Cutting up Corn Stalks for Fodder.—In our last number, (page 220,) we furnished some objections to the very common practice of pulling fodder, and advised the substitution of drilled corn, which we have long found to be an excellent and economical article both for "soiling," (or feeding green,) and winter hay. It is so hard to break up old habits, however, that we scarcely expect many of our readers to test this matter fairly; and lest, with all their fodder pulling, many may fall short of "roughness" before next season, we will offer another hint for their consideration. It is, to cut up their corn stalks at the ground, as soon as the ears begin to glaze or get hard; set up in shocks every 20 or 30 hills thus cut, and when the whole is perfectly dry, haul under cover, or carefully stack up; strip off the ears at your leisure, and save all the stalks, blades and shucks for the winter feeding of stock. This hint is especially intended for small planters—those who aim only to raise sufficient corn for their own use, and who desire to make the most of it, and to save all that is worth saving. Our objections against fodder pulling, (as before stated) are that it is a slow and laborious process, and that the yield and weight of the grain is lessened, by prematurely depriving the plant of its leaves. If fodder is pulled before the grain becomes glazed, you certainly injure the latter, and if you do not pull until the ears are fully ripe, the fodder is nearly worthless. The "golden mean" is to cut up your corn as directed, just when the grain is passing from the milky or doughy state to the hard kernel. At this period of its growth, the plant has elaborated sufficient sap to mature the grain perfectly after it is cut, and the surplus starch, gum and saccharine matter which it contains will be preserved in the stalk and leaves, instead of being changed to hard and worthless woody fibre, as when the plant is allowed to become perfectly dead ripe. Another advantage in thus cutting up corn is, that as soon as it is hauled off, the ground is ready for the plow, and after it has received

a good manuring, you can proceed immediately, with the sowing of your Winter Oats, Rye, Barley, Clover, &c., &c. Let those who have scanty crops try it, even on a small scale, and report results.

Feeding Corn Stalk Fodder.—In order to use corn with proper economy, every farmer and planter should have Scott's "Little Giant," or a similar mill for grinding both corn and cob. To this should also be added a Feed Cutter, suitable for cutting hay, sheaf oats, corn stalks, &c., &c. With this latter implement, the corn stalk fodder, shucks, oats, hay and other "roughness" may be finely cut up, and when mixed with a proper portion of corn and cob meal, slightly moistened, (with an occasional sprinkle of salt and ashes), you have an excellent and cheap provender for all kinds of farm stock. Roots, such as Turnips, Sweet Potatoes, &c., when plenty, may be added to the foregoing from time to time, and they will be found to give increased relish and improved health to your animals. The "merciful man is merciful to his beast," and humanity as well as self-interest dictates the best possible care of all dumb brutes dependent upon us.

Turnips.—Ruta Baga, Red Top, Early Flat Dutch, Yellow Aberdeen, Norfolk, Globe and other Turnips should be sown from the 1st to the 25th of this month. The ground should be plowed very deep, and pulverized as fine as possible. A deep, rather light and fertile sandy loam is best for this crop, and such soil ought to be plowed at least 8 or 10 inches, and thoroughly harrowed. Sow in drills from 2 to 3 feet apart, plants standing in the drill from 6 to 10 inches. Stable manure (10 or 15 loads to the acre) woods mould, ashes and broken bones, equal parts (6 or 8 loads to the acre) or 300 pounds of guano, scattered broadcast and plowed in, will give you a good crop. Should you wish to manure in the drill, open a wide and deep furrow with a long shovel plow, scatter your manure thickly along this drill, throw a flat, broad bed on the manure with a turning-plow, and after raking the surface smooth and even, drill in the seed as above directed. From one to one and a half pounds of seed, mixed with sand and carefully sown will be sufficient for an acre. Soak your seed 24 hours in lamp oil, then drain off the oil and dry the seed with ashes or plaster, and mix with moist sand for the convenience of separating the seeds in sowing. If you have plenty of leached ashes, you may top dress the ground with 10 or 15 bushels per acre, after sowing. It will be well, also, to dust the plants when they first come up, with a mixture of ashes, soot, plaster and salt, (a bushel to the acre) several mornings in succession, to prevent the attacks of the fly. Continue this until they get into the rough leaf, when they may be considered out of danger. When the plants are well up, clear out all grass and weeds with the hoe, and thin them to a stand of from 6 to 10 inches apart, according to the size of the variety. After thinning, work them out from time to time, until the tops shade the ground, when you may lay them by.

Sweet Potatoes.—Keep the earth fresh and loose around the plants, and the rows entirely free from weeds until the vines take complete possession of the patch. Lose no time, now, in cutting and setting out vines for the production of next year's seed.

Hay and Fodder.—Cut and carefully save drilled Corn fodder (as directed in July number, page 220); also make all the Hay you possibly can from Crab (or Crop) Grass, Crowsfoot, Pea Vines, tops of Ground Peas, Oregon Pea, Millet, &c., &c.

Ditching, Hauling Muck, Woodland Pastures, Strawberry Beds, &c.—The dry weather of this month will be found favorable to the ditching and draining of low, wet lands, clearing up of swamps, cutting underbrush, digging and embanking fish-ponds, preparing Strawberry patches, clearing the undergrowth of forests for woods pastures,

hauling of *muck* to the compost heap, destruction, by compost fermenting or burning of *noxious weeds*, &c., &c.

THE GARDEN

All plants of the *Cauliflower*, *Brocoli* or Cabbage family, may now be set out for fall and winter use. Continue to transplant *Celery*. Full crops of the different kinds of *Turnips* should be sown during the month, as directed above. Sow seeds of *Beets*, *Salsify*, *Carrots*, &c., for winter use—shading the ground by a slight "brush arbor," from the hot sun. *Radishes*, *Spinach*, *Lettuce*, &c., may still be sown, and *Snap Beans* planted for pickles. Plant, also, *Melons* and *Cucumbers* for mangoes and pickles. Keep down all weeds—use the hoe, and water freely. Plant a second or fall crop of *Irish Potatoes* and *Peas*, mulching both heavily with leaves. The *Purple Egg Plant*, *Tomato* and *Lima Bean* may be planted for a late crop, and will come yet, with "favorable seasons." Keep your *Strawberry Beds* clean, open and mellow now, if you desire to increase your plants, and encourage the growth of runners by an occasional showering with soap suds. If you do not want runners, cut them off and turn them under, to give back their substance to the bearing plants. Give these occasionally a light top dressing of leached ashes just before a shower, or water them with a very weak solution of potash.

THE ORCHARD AND NURSERY.

Peach, *Nectarine* and *Apricot* trees may be "shortened in" or cut back one-half of this year's growth, where the frost has destroyed the fruit; but where the trees have borne or are heavily laden, this operation may be deferred until October. *Budding* of all stone-fruits may still be continued, by those who adhere to this back-breaking and head-aching practice. Insert the bud on the north side of the stock, early in the morning, or just before night-fall, ceasing operations in the heat of the day.

THE FLOWER GARDEN.

Collect seeds of all *Annuals*, and preserve them carefully. Bud *Oranges* and *Lemons*. Propagate *Aloes* and the *Cacti* (or *Cactus*) by slips. Sow *Bulbous* rooted flower seeds to obtain new varieties. Stake your *Dahlias* and thin out the flowers, if too profuse. Clip *Box* edgings in moist weather. Cut and roll *grass plats* and *lawns*. Clean up walks, put on fresh gravel, and roll smoothly. Water your potted *Annuals* and other plants daily, in hot weather. Sow *Tulip* and other bulb seed. Gather all valuable seed as soon as ripe, and save for future use. Use *water* and weak *liquid manure* frequently, as heretofore directed.

SOUTHERN FRUITS—APPLES.

NO. II.

EDITORS SOUTHERN CULTIVATOR.—Having omitted, in our former article on Southern Fruit, to call your attention to an Apple, brought before the public by Dr. J. C. JENKINS, of Natchez, Miss., I must beg the liberty of doing so at this time, as the labors of the Doctor, through the press and in the orchard, entitle him to the thanks of every Southern Pomologist and Agriculturist. We would that such men as Dr. BALDWIN, Rev. J. L. MOULTRIE, Dr. M. W. PHILIPS, R. NELSON, S. McDOWELL, ST. CLAIR J. LEAVEL, of Kentucky, and Dr. J. C. JENKINS, were to be found in every county in every Southern State, together with many others we could name. With such exertions as have been made by these gentlemen in the cause of Horticulture and Pomology, much has been, and more still will be elicited and accomplished, that cannot fail to place our list of Southern Seedling Fruits in a conspicuous position before the public.

Through the exertions and enterprise of these and other gentlemen in other Southern States and Counties we

could name, the scepticism on the question of raising Apples in the South successfully, has been dispelled, and in place of which we are now seeing broad and vigorous orchards growing up through the length and breadth of the South, where, but a few years since, blackberries and persimmons constituted the variety in most localities.

The example and success, demonstrated by these pioneers in the cause, we are happy to add our humble testimony, is having a salutary influence in creating a taste for the more general pursuit of Pomology, and for which the Southern States are pre-eminently adapted in soil and climate.

But we must return to the previous question, with which we started—the Elgin Pippin. This apple, Dr. J. C. JENKINS informs us, has been cultivated in the vicinity of Natchez, Miss., and is supposed either to be a seedling from the Spanish Reinette or Cameusar, or that fruit itself so modified and changed through acclimation and long cultivation, as to have become peculiarly adapted to that region of country. With him, we should suppose it to be a seedling raised by the early French or Spanish colonists, as he has traced its history back some fifty years or more, at which time it would have been almost impossible to have imported living trees; seeds were probably planted by the colonists, and this, one of the remaining trees produced from them. We would like, and intended, when we commenced this article, to give the specific description of this apple as we received it from him, but on making search we cannot find it amongst the numerous favors of our Pomological correspondents. We are in hopes to receive a specimen of the fruit this fall, from which to make drawings, and should we be thus favored, will torment your readers with a view and description of it through the medium of the columns of the *Southern Cultivator*. Suffice it to say, at this time, we are of the opinion it will be found to be a valuable acquisition to our Southern list of Apples. We are now cultivating, in our Nursery and specimen orchard, about fifty varieties of Southern Seedling Apples, with the fruit of which we are personally acquainted in some forty varieties, and to which we give our unqualified approbation in preference to the choicest varieties cultivated in the Northern States.

As evidence of the superior adaptation of Southern Seedling varieties over Northern, we give the following:—We had duplicate specimens of trees of most of the Northern desirable varieties, such as Peck's Pleasant, Vandevere, Rhode Island Greening, Pound Royal, Minister, Baldwin, Bellefleur, Spitzenberg, Newton Pippin, &c., &c. The tops of some of these we cut off last spring (1854) and grafted with such Southern varieties as the Nickajack, Wall, Walker's Yellow, Cullasaga and Berry, &c., &c.; some of which are now loaded with fruit, whilst their mates standing beside them are still without any. There is a singular fact connected with those regrafted; the tops are out-growing the stock or trunk and have to be staked to keep them in an upright position, and in most instances are larger than those before mentioned. These trees have stood where they now are for some 5 years and made but a slow and stunted growth, whilst the grafts worked on their mates shot out from one to four and five feet the first year.

This, we hold, should be sufficient to convince every unprejudiced mind that our Southern Seedlings are the only and best kinds for Southern soils and climate.

We have just had some fine specimens of the Early Harvest Apple, a Northern variety, from our own orchard, together with some of our well known Southern variety, the Red June. The Early Harvest ripened some 5 or 6 days before the latter, and on comparison, side by side and taste by taste, from first one and then the other, we write down the Early Harvest as second best to the Red June in size, flavor and appearance, whilst the latter tree bore ten to one in number to the former.

This being a very propitious year for fruit in this section of country, we shall take the responsibility, from time to time, as the varieties ripen, to make comparisons, and if you think the result of sufficient importance to be placed before the readers of the *Southern Cultivator*, they shall be at your service; if not, why, just pass a resolution that they be laid on or under the table.*

There are a number of other new varieties not yet fairly before the public, which, if we are not greatly mistaken, will come in for no small share of popularity. Amongst which, we prophecy, such as Kentucky Red Streak, Selma, Taunton, Bonum, Pryor's Red, with some two or three seedlings, now bearing for the first time in our own neighborhood, will be justly entitled to no small share.

Lest your readers may call us a one-idea man, we will stop this gabble about Apples, and in our next give our experience with Pears. Should there still, however, be any who have never seen a healthy or vigorous Apple tree in Georgia, we can now assure them, if they will visit Habersham county, we think we can gratify their vision with no mean specimens, if a tree forty feet in diameter, from one extreme limb to the other is not too diminutive for their notice, and that, too, loaded with crimson June Apples.

Wheat, Oats and Corn crops are all first rate. Irish Potatoes are calling to their comrades to lay off and make room. Fruit, a good crop—except Peaches, which were badly killed with frost—never saw it so large and fair before. A kind Providence has opened the windows of the store house of Heaven and is pouring down upon us of His great abundance.

J. VAN BUREN.

Clarksville, Ga., July, 1855.

GRAPE GROWING IN THE SOUTH.

EDITORS SOUTHERN CULTIVATOR—I am desirous of information relative to the Grape culture, &c.; the kind best adapted for the South; the time for planting, the period from planting to producing, and the mode of culture.

I would be pleased if you would lay this subject before some of your grape growing friends, and elicit the information wanted by private letter to my address, or through the *Cultivator* if they prefer it.

Respectfully,

J. S. G.

Enterprise, La., 1855.

REMARK.—We commend the foregoing to the attention of Dr. McDONALD, of Woodward, S. C. His long and extensive experience in Grape growing, fully qualifies him as a guide and instructor in this delightful branch of pomology, and we hope he will respond to the wishes of our correspondent and many others, who desire information on this subject.—EDS.

WINE FROM NATIVE GRAPES, OR MUSCADINES.

EDITORS SOUTHERN CULTIVATOR—It may not be generally known that the common wild grape will make an excellent wine. Permit me to give the readers of the *Cultivator* the process of making it:

When the grapes are fully ripe, gather them and pick off all the faulty and unripe grapes, and if you have time and patience, pick them off the bunches; if not, they may be pressed while on the clusters by putting them in a sack made of some strong cloth; put the sack in a common cider press, and as you put in the grapes mash them lightly with a wooden pestle; avoid mashing the seed;

press them as long as the juice will run, then raise your press and stir them up; mash and press again; continue the operation until the juice is entirely extracted. Put the juice in a cask or jug, filling it full, so that when it ferments the foam or froth may work out, but not full enough for the juice to run. Keep some of the juice in another vessel, so that you may fill up the cask every two or three days, in order that the foam may work over. Put a cloth over the mouth of the jug or cask to keep out flies and other insects, but it should be loose enough to allow the foam to work out. Let it stand until fermentation ceases, which may require five or six weeks, but some times not half that long. Then rack it off as long as it will run clear; then put one pound of sugar and half a pint of French Cognac brandy to the gallon; put it in your jugs or cask, filling them full; cork it up tight, so as to exclude the air entirely; then the longer it stands before using, the better it will be.

The above process will answer for the Muscadine, which makes a good wine; or for any other variety of grape.

J. R. T.

Walton, Co., Ga., July, 1855.

Domestic Economy and Recipes.

PRESERVING EGGS.

HOW TO PRESERVE EGGS? and also a recipe appears in the *Cultivator*. Permit me to give you the experience of a practical lady on the subject.

Grease fresh eggs with lard, and pack them away in a keg with alternate layers of corn or wheat bran, small ends downwards, and so arranged as neither to touch each other or the sides of the keg. In this way they have been kept perfectly sound for twelve months.

Mount Lebanon, La., May, 1855.

FARMER.

CLEANSING GUNS.—A correspondent of the *Scientific American* communicates the following, which may be of value to sportsmen:

Wash your gun barrels in spirits of turpentine, by dipping a rag or sponge fastened on your gun-rod into the liquid, and swabbing them out three or four times, when they will be cleared from all impurities, and can be used almost instantly, as the turpentine will evaporate and leave the barrels dry, even if they are a little moist, it will not prevent their going off, like water. After being washed thus, there is no danger of rust, as when water is used. I am an old experienced gunner, and have practised this for years, and found it useful.

The *American Agriculturist* remarks on the above:—"We think, however, that a mixture of one part of spirits of turpentine and two or three parts strong alcohol (spirits of wine) well shaken together, would be preferable. Cleaned in this way, they will dry and be ready for use immediately."

KILLING FOWLS.—Only turkeys and geese should be bled to death; the flesh of chickens becomes dry and insipid from loss of blood. The best plain, says the Poultry Journal, is to take a blunt stick, such as a child's bat or wooden sword, and strike the bird a smart blow on the back of the neck, about the third joint from the head. Death follows in a moment.

TO PRESERVE DEAD GAME.—Take out the intestines and fill the inside with unground wheat, and place the fowl in a heap or cask of the same grain in such a manner as to insure its being completely covered. In this way fowls may be preserved perfectly sweet for months. The feathers should be removed.

*Send us on these pomological notes, by all means. No subject can possibly possess more interest for our readers or ourselves.—EDS.

Advertisements.

1855! GLOAMING NURSERY.

1855!

THE Subscriber having added many additional varieties of Southern Seedling FRUIT TREES to his former stock, comprising some fifty varieties of Apples, one hundred of Pears, twenty of Cherries, twenty of Peaches, Nectarines, &c., and being re-assured of their superiority over those raised in Northern Nurseries. With confidence, founded on experience, again offers them to the attention of Southern Farmers, Planters and Pomologists at such prices as, he hopes, will leave no excuse for continuing to import them. Our trees are all grafts done on seedling stocks two years old before grafting, consequently have good roots.

R. K. LAUGHLIN, Esq., 143 Carondelet street, New Orleans, is our Agent for Mississippi, Louisiana, and Southern Alabama.

* Catalogues for 1855 sent (gratis) to all applicants.

J. VAN BUREN, Clarksville, Habersham Co., Ga.

Aug 55—4t

TO THE PLANTERS OF THE SOUTH.

THE Belleville Manufacturing Company would call your attention to the different styles of GEORGIA PLAINS, which they are now manufacturing for the coming season, believing they are better adapted to the wants of the South than any negro cloths manufactured at any point north of the Potomac. They have been successfully supplying the orders of Planters in the interior and on the seaboard for a number of years, and have given satisfaction in every respect, so much so that none who have used them one season have failed to order them afterwards; and the name has been considered so fair a guaranty of their quality that in many cases the Northern Manufacturers have endeavored to imitate and pass off their fabrics as the genuine Georgia Plains. Having increased the capacity to produce these goods, we, therefore, desire to deal directly with the Planters, so they may get the genuine article for their negroes, which, for warmth and wear, will save them more than its cost in Doctor's Bills.

We are now making three styles, to wit:—The Heavy White Twills at 40 cents per yard; the Heavy White Plains, 32 cents per yard; the Brown A Plains, 21 cents per yard.

The goods delivered at the Agency in Augusta, Ga., and forwarded free of charge for forwarding, and to be settled for on receipt of the goods, by orders on any responsible Factor or Commission Merchant, payable on the 1st February next. All orders will be put up in quantities as directed, in a bale or bales, and can be shipped from Augusta to any point South or West at as low a rate of freight as from any point. Planters who have no regular Factor, can give a reference, either in Augusta, Charleston, Savannah, Mobile, Montgomery or New Orleans or in such place as they are known, and if satisfactory, the order will be entered at once and the goods put up and forwarded at as early a date thereafter as possible.

The highest market price will be given for WOOL, delivered in Augusta, in exchange for cloth. Address

GEORGE SCHLEY, President,
or, S. H. OLIVER, Agent Belleville Factory,
Augusta, Ga.

Jul; 55—4t

GREENE'S PURE WHITE WHEAT.

I HAVE a very superior kind of WHITE WHEAT that I will engage to those who may want to purchase for seed wheat of the next crop, to be delivered at the La Grange depot in good, strong sacks, containing not more than one bushel unless ordered, nor less than a half; marked with the name of the purchaser and place of delivery. This Wheat is of the very earliest and whitest kind. Sown any time in November, and cut by the 20th of May. It has been exhibited at four different Fairs, and have obtained a premium in every instance. I have already made many engagements for the next sowing at five dollars per bushel. No Delivery no pay.

E. H. GREENE

La Grange, March 29d, 1855.

April 52—4t

IMPORTANT TO PLANTERS.

THE Richmond Factory (Richmond county, Ga.) continues to manufacture WOOLEN CLOTH, for Negro Clothing, at 12½ cents per yard—fining every material except the wool.

Those wishing to avail themselves of this opportunity to procure for their Negroes a superior article of Winter Clothing, have only to wash the wool clean in cold water, and send it to the factory, or to Messrs. SCRANTON, SEYMOUR & Co., in Augusta, with instructions as to the amount of Cloth they wish made—whether heavy or light. If the wool be dirty, half a cent per yard will be charged for washing it. Burrs are not objectionable, as a machine is provided for removing them.

Wool is also carded into Rolls, for those who make their Negro, or other Clothing at home.

The terms now offered are so reasonable as to warrant a continuance of the liberal patronage heretofore extended by the planting community.

The Wool should be sent as soon after shearing as convenient, with the name of the owner distinctly marked on the bag or bale, that all the patrons of the establishment may be accommodated in due time.

Wool sent by any of the lines of Railroad, in Georgia, or South Carolina, or by steamboat on the River, directed to "Richmond Factory, care of SCRANTON, SEYMOUR & Co.," will meet due attention, and the Planter will always have his own wool manufactured into Cloth and returned to him.

The highest cash prices will be paid for WOOL.

WILLIAM SCHLEY, President R. Factory.

June 55—4t

FERTILIZERS.

HITHERTO the Planters of the South have been dependent on the North for all the artificial fertilizers they have used. The New Orleans Bone Black Company recently established in this city, with facilities for the manufacture of manures second to none in the United States, are prepared to fill orders for the following FERTILIZERS at the same prices charged in Baltimore and New York:

GROUND BONES.—For fruit trees and grape vines these are particularly beneficial. Five hundred pounds applied to an acre of ordinary pine wood land, aided by good, deep plowing, will produce a crop of Cotton as large as any of the best bottom lands. It is ground both fine and coarse, and is put up in barrels. The coarse is 1½¢ per pound—the fine and sifted, 1⅞¢ per pound. Its great durability in the soil renders it the cheapest manure in use.

PHOSPHATED GUANO.—This valuable fertilizer, composed of equal parts of Peruvian Guano and fine Bone Dust, is, in every respect, superior and far more lasting than Guano used by itself. It is an established fact that Guano lacks Phosphate of Lime, and, also, that one half of its fertilizing qualities are dissipated in the air, which is plainly to be perceived by the strong ammoniacal smell constantly emitted by it until its strength is gone.

Bone Dust is nothing more than Phosphate of Lime, and this, besides being a strong and valuable manure, fixes the Ammonia in the Guano and retains it until it is absorbed by the plants. A trial of this fertilizer will satisfy any one of its durability and superior efficacy to simple Guano. Three hundred pounds applied to the acre will show its effects for five years or more, by an annual increase of at least 10 percent in the crops. Put up in barrels of about 200 pounds each, at 2 cents per pound.

SUPER-PHOSPHATE OF LIME.—This highly concentrated manure is composed of Animal Matter, Sulphuric Acid, Bone Dust, Gypsum and Sulphate of Iron, each of which, by itself, is a powerful fertilizer.

Five hundred pounds, or about two barrels of this Super-Phosphate of Lime have been found to be fully equal in beneficial effects, to thirty wagon loads of ordinary Stable Manure.

The convenience of this article consists in its small bulk and consequent ease of handling. It may be used before or after planting of the crop. A tablespoonful put in each hill of Corn or Cotton, has been known to increase the yield twenty per cent. Five hundred lbs. to an acre of common piney woods land having a clay subsoil, will enable it to yield as good a crop as any ordinary bottom land. A single hundred pound applied as a top-dressing to an acre of meadow land, will increase its products at least a ton-of hay. To Horticulturists, it is invaluable, as it may be applied to Fruit Trees at any season of the year. More than two thousand bushels of Ruta Baga Turnips have been raised to the acre, by the application of 200 lbs. of this fertilizer. For Garden crops, it is all that is necessary for success.

The Super-Phosphate of Lime is put up in barrels containing about 200 pounds, and is sold at 2 cents per pound.

POUDRETE.—Two large establishments in New York, turning out over fifty thousand barrels annually, are not able to supply the demand of the market gardeners in the vicinity of that city for this justly popular manure. It is composed of night soil, deodorized and made into a powder similar to Guano, and is put up in barrels at \$2.50 per barrel.

Orders by mail or otherwise, addressed to the subscriber, will receive prompt attention.

D. C. LOWBER,
37 Broadway street.

Land Plaster, Peruvian Guano and Land Lime may also be ordered at the above address.

July—1t

DAVY'S DEVON HERD BOOK.

NOW ready, a large supply of both 1st and 2d volumes, bound in one book, and containing all the subjects connected with the Devon Herds of both of England and America, up to the present time, and also, as a frontispiece, the beautiful engraving of the celebrated picture known as the "Quartly Testimonial," which is a full length portrait of Mr. Francis Quartly, now living, at 91 years of age. It is also illustrated with two animals, prize-winners in England. Price \$1, and can be had by enclosing the amount to B. P. Johnson, Corresponding Secretary of New York State Society, Albany, N. Y.; Luther Tucker, Editor of the *Country Gentleman*, Albany, N. Y.; Sanford Howard, Boston, Mass.; D. D. T. Moore, Editor of the *W. G. & S. Register*, Rochester, N. Y.; A. B. Allen, Editor of the *American Agriculturist*, N. Y.; Samuel Sands, Editor of the *American Farmer*, Baltimore, Md.; A. M. Spangler, Editor of the *Progressive Farmer*, Philadelphia, Pa.; D. Lee and D. Redmond, Editors of the *Southern Cultivator*, Augusta, Ga., and Wm. McDougall, Editor of the *Canadian Agriculturist*, Toronto, Canada.

It gives me pleasure to state that Mr. Davy has solicited Mr. S. Howard, of the *Boston Cultivator*, to collect pedigrees and illustrations in this country for the 3d volume, and has authorized Mr. H. to obtain information as to any and all mistakes which may have been made as to the recording of American Animals in Davy's 2d volume, and such corrections will be made in the 3d volume. The plan proposed is that a copy of all the pedigrees and illustrations collected by Mr. H., as the Editor in America, shall be forwarded to Mr. Davy, and a copy of those collected by Mr. D. will be sent to Mr. Howard in this country. The whole matter will be published in America for our use, and in England for their use, by which means an American and English Devon Herd Book will be united, and the price reasonable, as the expense of English printing and duties will be saved. This concert of action has been brought about by Mr. Davy's good feeling and liberality towards this country, and I am only the instrument through which Mr. Davy acts, and from this time forth Mr. Howard will receive all communications on the subject, as will appear by reference to his advertisement.

All Editors who will give the above three insertions will receive a copy of the 1st, 2d and 3d volumes.

L. G. MORRIS, American Agent
for J. Tanner Davy's Devon Herd Book.

June 55—3t

PLANTATION FOR SALE.

I OFFER for sale, my PLANTATION, situated in Marengo county, Ala., nine miles south of Demopolis. The place is very productive in corn, cotton and small grain, and the soil being very rich in lime I think it would produce clover admirably. I have just seeded 30 acres, of which there is a beautiful stand of young clover. The plantation is healthy, has an abundance of stock water in every field, and offers great advantages to any one wishing to raise stock of every kind. Belonging to and adjoining the plantation, is a large tract of heavily timbered pine land. There is, on the place, a horse-power Saw Mill, which will cut from 1200 to 1500 feet of lumber per day, which can be made to pay handsomely, as the demand for lumber greatly exceeds the supply.

My residence is 2½ miles from the plantation, healthy, convenient to churches and schools and in a thickly populated neighborhood. The dwelling contains 8 rooms; all necessary outbuildings; a very large and rich garden; plenty of good water; pasturage and fire wood convenient. The whole contains 1650 acres—9 or 1,000 cleared, and under fence. As I am determined to move from this section, I will sell a great bargain to any one for cash, or negotiable paper, bearing 8 per cent. interest. I would like to sell stock of all kinds, corn, fodder, oats, &c., at the same time.

I make on the plantation, last year, seven bales of cotton to the hand, and corn to do the plantation, and the seasons were anything but propitious. The titles are clear and indisputable, and the whole may be bought at the extremely low price of Twelve Thousand Dollars.

My post office is Spring Hill, Marengo county, Ala., where letters, post-paid, will receive prompt attention. I will take great pleasure in showing the place to those wishing to purchase.

July 4th

JAMES R. JONES.

CHEROKEE!

A VALUABLE LOT OF LAND FOR SALE.

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this Lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

* For terms, &c., apply to the subscriber, or to Col. J. W. M. BERRIEN, of Rome, Ga., who will take pleasure in pointing out the land.

D. REDMOND,

September—1st

Augusta, Ga.

PURE DEVON AND GRADE CALVES FOR SALE!



ONE very beautiful thorough-bred NORTH DEVON HEIFER CALF, 5 months old—sire, "Keokuk," dam, "Lively Dame"—for pedigrees of which see September number (1853) *Southern Cultivator*.

Also, a number of grade or half blood heifer and bull CALVES, of 1854, various ages—all from good native cows, and sired by premium bull "Keokuk," purchased from the Messrs. WAINRIGHT by Judge WARREN. For particulars, &c., Address

D. REDMOND,

May 5—1st

Augusta, Ga.

WM. ALLSTON GOURDIN,

FACTOR AND COMMISSION MERCHANT,

CORNER East Bay-Street and North Commercial Wharf, Charleston, S. C., is prepared to make liberal advances on consignments of COTTON, CORN, SUGAR, FLOUR, GRAIN, HAY, &c.

Genuine Peruvian Guano Depot!

FARMERS' PLASTER, CHARCOAL, BONE DUST, MINERAL PHOSPHATE LIME, SUPER PHOSPHATE LIME, &c.
Always on hand.

Sept. '54 1^y

FOR SALE!

A SEA Island Cotton Plantation, containing 900 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skidaway Island, in Chatham county, on a bold salt water river, the health of which is unquestionable, and the facility for manuring with marsh and mud is unsurpassable, the land lying three sides on the river. The place is situated 11 miles from Savannah. The lands of Skidaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters and for stock raising. Price \$3,500. Terms accommodating. Apply to

S. F. DUPON, Savannah.

Isle of Hope, March 9, 1855.

April—1st

CARMICHAEL & BEAN,

DEALERS in HARDWARE, CUTLERY and AGRICULTURAL IMPLEMENTS, Augusta, Ga.

We are, also, Agents for the following articles:—SALAMANDER SAFES, made by Stearns & Marvin, New York; LITTLE GIANT CORN and COB MILLS; Indian Rubber BELTING, PACKING and HOSE, made by Boston Belting Company; ATKINS' SELF RAKING REAPER; CIRCULAR SAW, made by Hoe & Co., and Welch & Griffith's HORSE POWERS; FAN MILLS, THRESHERS and SMUT MACHINES.

CARMICHAEL & BEAN,

April 15—Cly

Augusta, Ga.

F. MCCREERY,
Charleston,R. M. HOOKE,
Chattanooga.

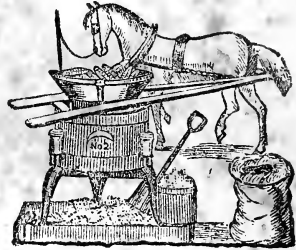
MCCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market.

Feb 55—Cly

SCOTT'S LITTLE GIANT CORN AND COB CRUSHER.



THE attention of Planters and Stock-Feeders is respectfully called to this Mill, as the best and most profitable article now in use. In setting up, no mechanical work is required, it being only necessary to fasten it down to a floor or platform.

No. 2 will crush 10 bushels per hour with one horse, and it is sold for \$55, all complete, ready for attaching the horse.

No. 3, at \$65, grinds 15 bushels per hour; and No. 4, at \$75, grinds 20 bushels per hour with two horses.

CARMICHAEL & BEAN, Agents,
Augusta, Ga.

AUGUSTA, GA., April 8, 1855.

I have been running one of Scott's Little Giant Corn and Cob Mills, No. 4, for the last five weeks, and it performs to my entire satisfaction. It was warranted to grind 20 bushels per hour, but I have ground over 85 bushels in an hour and a half, or equal to 23½ bushels per hour. In feeding 80 horses, I save at least 100 bushels of Corn per month, it now requiring only 800 bushels of Corn with the cob, where I formerly fed 800. I consider it decidedly the best kind of Crusher ever got up, and if I could not replace mine I would not sell it for \$500.

I. D. MATHEWS,

June 55—1st

Proprietor of the Augusta Omnibuses.

P. D. GATES,

COMMISSION MERCHANT,

AND Dealer in AGRICULTURAL IMPLEMENTS and MACHINERY, No. 12 Broadway, New York.

Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Powers and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines.

June 55—Cly*

DOMESTIC ANIMALS AT PRIVATE SALE.

L. G. MORRIS' Illustrated Catalogue, with prices attached, of Short Horned and Devon BULLS, and Bull CALVES; a few HORSES; South Down RAMS; Berkshire, Suffolk and Essex SWINE, will be forwarded (if desired) by addressing L. G. MORRIS, Fordham, Westchester county, N. Y., or A. J. BECAR, 187 Broadway, N. Y. It also contains portrait, pedigree and performance on the Turf of the celebrated horse, "Monarch," standing this season at the Herdsdale Farm.

June 55—1st

AYRSHIRE HEIFERS FOR SALE

AT \$100 EACH.

HEIFER, "PARAGON," one and a half years old, calved March, 1853; Dam "Princess Mary," grand dam imported "Mary Queen of Scots" sire, imported bull "Robert Burns." "Princess Mary" gave 18 quarts per day, "Mary Queen of Scots" upwards of 30 quarts.

Heifer, "MARIE LOUISE," one and a half years old, calved March, 1853; dam "Maria Teresa," 1^y imported "Germantown," grand dam "Mary Queen of Scots," imported from Scotland; sire, imported bull "Robert Burns." "Maria Teresa" gave 20 quarts per day, "Mary Queen of Scots" gave 3½ quarts.

Jan 55—1st

RICHARD PETERS, Atlanta, Ga.

RANDALL'S COTTON PLANTER !

PALMYRA, Lee County, Ga.,
March 12th, 1855. }

To Cotton Planters.

WE DESIRE to call your attention to a Machine which we have invented and patented for the PLANTING OF COTTON. Its superiority over all others used for a similar purpose, consists in its great simplicity, requiring no more experience for its use than for an ordinary plow; the cheapness of construction, the great saving of time and labor in the planting of the crop, but more especially in the cultivation of it.

The certificates which we herewith present to you are from some of the most respectable and intelligent planters in our country, who have thoroughly tested our Machines, and sustain us in the above statement of the advantages it possesses. We are confident that when presented to the Cotton Planters throughout the Southern States, it will, in a short time, be universally used by them for planting their crops.

In bringing these Machines before the public, we have taken every precaution to free them from the liabilities of being associated with the mass of patented inventions, which do not stand a practical test, and we can assure all who will try them that they will fully equal our representations.

The Machines may be had of the following manufacturers:—
THOMAS J. CHEELEY, Augusta, Ga.; BROWN, CLEMENS & Co., Columbus, Ga.; J. H. WATSON, Lee co., Ga.

WM. W. CHEEVER, Esq., Albany, Ga., is our only Agent, who will contract for us with parties wishing to manufacture the Machines in any part of the United States. RANDALL & MERCER.

CHARLES RANDALL,
LEONIDAS B. MERCER. }

Palmyra, Lee co., Ga., Aug. 10, 1854.

GENTS:—Having planted your entire crops with our Cotton Drill, please give us your candid opinion of the machines, and particulars as to the advantages to be derived from their use, and oblige,

Yours respectfully, RANDALL & MERCER.
To Messrs. S. D. McLENDON, WM. H. OWENS, ROBT. LUNDY.

Palmyra, Lee co., Ga., Aug. 12, 1854.

GENTS:—Your favor of August 16th, came duly to hand. In giving you our opinion of your Drills, in the first place we would say, we are pleased in every particular with their operation, and as to the advantages to be derived from their use:—the first is the saving of at least one hundred and fifty bushels of Cotton Seed, in planting each hundred acres; second, a saving of labor in planting, of one horse and hand, planting from eight to nine acres per day, the Machine opening the furrow, dropping the seed and covering as it moves over the ground; third, a more perfect stand may be obtained with your Drill than by planting in the common way; fourth, a saving of at least one-third in the labor of chopping out; fifth, the seed being put in a line not one-half an inch in width, the chopping out can be deferred, until the season for hoeing is passed, without injury to the growth of the Cotton; and being in this narrow line with a sweep or narrow rooter, you can side so close as to cover up the first crop of grass in the Drill without injuring the stand of Cotton in the least. By this close sowing nearly all hoe work may be dispensed with, after chopping out. These we consider the principal advantages to be derived from the use of your Drills. On a retrospect of our last year's experience we have no hesitation in saying that any person with your Drills, can cultivate at least twenty five per cent. more Cotton to each hand, with the same labor than can be cultivated in the common way of planting. We put that at a low figure so that no one can say they have been deceived by us. In the hope that these Machines may come into general use, we subscribe ourselves,

S. D. McLENDON,
WM. H. OWENS,
ROBT. LUNDY.
Yours very truly,
Albany, Dougherty co., Geo. Aug. 16th, 1854.

GENTS:—Yours of August 14th, with enclosed is before us. In reply we would state that we believe any person using your Cotton Seed Drill will realise every advantage Messrs. McLENDON, OWENS & LUNDY speak of; and we fully coincide with them in their high appreciation of your invention.

Yours respectfully,
J. H. WATSON, Lee co.
DAVIS PACE, Dougherty co.
WM. B. McLENDON, Randolph co.
B. B. DANIELS, Lee co.
Y. G. RUST, Dougherty co.
JAMES CHEEK, Lee co.
JEREMIAH HILLSMAN, Lee co.

To Messrs. RANDALL & MERCER.

Palmyra, Lee co., Aug. 10, 1854.

MESSRS RANDALL & MERCER:—In reply to yours of the 5th inst. in regard to the operation of your Cotton Seed Drill, I am happy to say that after planting a portion of my crop in the old way, I was enabled to obtain one of your Drills, with which I finished. It is what we have long wanted, and the beautiful work it performs has perhaps been attempted in a thousand different ways by intelligent planters, but with only partial success; yours leaves nothing to be desired; it deposits the seed uniformly, and constantly on a line of one to two seeds in width; saves about one-half of the labor in planting, and one-third of the hoe labor in cultivating. All must use this drill in self defence; I shall, for one.

More cotton may be planted and cultivated, and if not the labor saved, may be turned into other channels. Yours respectfully,
April—11 J. L. MERNER.

GEORGIA RAILROAD.

CHANGE OF SCHEDULE.
PASSENGER TRAINS.

LEAVE Augusta, daily at 6 A. M. and at 5 P. M.
Arrive at Augusta daily at 8.25 A. M. and at 16.19 P. M.
Leave Atlanta daily at 8.50 A. M. and at 6.15 P. M.
Arrive at Atlanta daily at 2.50 A. M. and at 3.56 P. M.

CONNECTING WITH ATHENS BRANCH.

Arriving and leaving Union Point daily (Sundays excepted) at 10 A. M. and leaving at 2.50 P. M.

WITH WASHINGTON BRANCH.

Arriving at Cumming daily (Sundays excepted) at 9 A. M.
Leaving " " " 8.50 P. M.

WITH SOUTH CAROLINA TRAINS.

Leaving Augusta daily at 9.20 A. M. and 9.50 P. M.
Arriving at Augusta daily at 8.00 P. M. and 4.30 A. M.

WITH ATLANTA AND LAGRANGE RAILROAD.

Leaving Atlanta, daily at 8.30 A. M. and 4.45 P. M.
Arriving at " " 7.55 A. M. and 5.55 P. M.

WITH WESTERN AND ATLANTIC RAILROAD.

Leaving Atlanta daily at 9 A. M. and 6 P. M.
Arriving at " " 8 A. M. and 3 P. M.

GEO. YONGE, General Superintendent.

July 14, 1855.

Aug 5—11

EXTENSIVE COLLECTION OF SELECTED ROSES AND
SOUTHERN RAISED FRUIT TREES.

AUGUSTA NURSERY.

F. A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Came'lia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE.
Nov—11 Augusta, Ga.

RICH COTTON LANDS OR SALE!

THE Subscriber offers for sale Forty Thousand Acres of the most productive COTTON LAND, in the Southern country, situated in the counties of Lee, Dougherty and Baker, in bodies of five hundred and two thousand Acres each, a part of which is partially improved.

For certainty of crops and durability these lands are unequalled in the Southern States. Similar lands contiguous in cultivation, are yielding an average of seven bushels Cotton, per hand, for a series of years, and eight to twenty-five bushels Corn per acre.

Terms liberal. If desired, a credit of one to five years will be given.
Albany, Ga., March 15, 1855. WM. W. CHEEVER.
April—11



THE SOUTHERN NURSERIES,

WASHINGTON, ADAMS CO, MISS.

are now well stocked with all the varieties best adapted to the South, of FRUIT TREES and SHRUBS, VINES, STRAWBERRY PLANTS, &c.; and of ROSES and other ORNAMENTAL SHRUBS and TREES, EVERGREENS, &c., all of Southern growth, and of good size.

The packing is so carefully attended to, that Trees and Plants, Roses, cuttings for hedging, &c., are sent to all parts of the South, with scarcely a chance of their being injured.

Catalogues will be sent on application.

Nov—11

THOMAS AFFLECK.

AFFLECK'S

SOUTHERN RURAL ALMANAC.

A handsome little volume, full of useful and interesting hints on RURAL AFFAIRS IN THE SOUTH. WILL BE ISSUED AS USUAL ABOUT THE FIRST OF NOVEMBER. Price 10 cents.

AFFLECK'S COTTON PLANTATION RECORD AND ACCOUNT BOOK—New Edition, now ready—No. 1, for forty hands or less, \$2 50. No. 2, for eighty hands or less, \$3 00. No. 3, for one hundred and twenty hands or less, \$3 50.

AFFLECK'S SUGAR PLANTATION RECORD AND ACCOUNT BOOKS—No. 1, for 80 hands or less, \$3 00. No. 2, for 120 hands or less, \$3 50.

These Books are now in general use amongst Planters. They will be sent by mail, prepaid and carefully enveloped at the above prices, and when five copies are ordered by clubs, and remitted for, an additional copy will be sent as commission to the individual making up the Club. Orders solicited from Booksellers and other dealers, to whom a liberal discount will be made.

B. M. NORMAN, Publisher,
14 Camp street, New Orleans.

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PREMIUM STRAWBERRY PLANTS!

THE Subscriber will furnish, at any time after the first of October, a limited number of the following desirable varieties of STRAWBERRY PLANTS, at the prices annexed:

Pistillates.	Per Hundred.	Staminates and Hermaphrodites.	Per Hundred.
Hovey's Seedling.....	\$.2	Early Scarlet.....	\$.2
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A deduction of 50 to 50 per cent. when 500 or more plants are ordered at one time. All plants carefully packed, and sent in good order to any part of the country. Orders, accompanied with the money, promptly attended to. Address
August 5—tf D. REDMOND, Augusta, Ga.

RESCUE GRASS SEED.

A LIMITED quantity of this SEED (crop of 1855) for sale by
August 5—tf D. B. PLUMB, & CO., Augusta, Ga.

TO THE FARMERS AND PLANTERS OF THE SOUTH.

THE undersigned have received the exclusive Agency for the entire South and Southwest for the very best CORN and COB CRUSHERS now in use, and the only articles of the kind that will make fine meal, suitable for the table—they are guaranteed to do. These Mills will effect a saving of 33 per cent., or fully one-third, in crushing the food prepared for stock, as has been satisfactorily tested. Price from \$50 to \$75. Every Farmer and Planter in the land should have them.

Manufactured and for sale by W. F. HENRY & Co., Meetingstreet, near Line street, Charleston, S. C.; MCCREERY & HOOKE, Brown's Wharf, Charleston, S. C. and J. A. ASLEY, Commission Merchant, Broadstreet, Augusta, Ga.

August 5—5t

LANGLEY & CO., General Agents,
Charleston, S. C., and Nashville, Tenn.

1855!

SOUTHERN CULTIVATOR,

A MONTHLY JOURNAL.

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE
Horticulture, Stock Breeding, Poultry, Bees, General Farm Economy, &c., &c.

Illustrated with Numerous Elegant Engravings.

ONE DOLLAR A YEAR IN ADVANCE.

DANIEL LEE, M. D., and D. REDMOND, Editors.

The Thirteenth Volume will commence in
January, 1855.

THE CULTIVATOR is a large octavo of Thirty-two pages, forming a volume of 834 pages in the year. It contains a much greater amount of reading matter than any Agricultural journal in the South—embracing, in addition to all the current agricultural topics of the day,

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Inserted at ONE DOLLAR per square of twelve lines, each insertion; One square per annum TEN DOLLARS.

ADDRESS WILLIAM S. JONES, Augusta, Ga.

Persons who will act as Agents, and obtain Subscribers, will be furnished with the paper at club prices.

SOUTHERN CULTIVATOR FOR 1854.

BOUND volumes of the CULTIVATOR for 1854 may now be obtained at this office. Price, \$1.50. Or we will send it by mail, post-paid, at \$1.80. Address WM. S. JONES, Augusta, Ga.

AUGUSTA SEED STORE.

THE Subscriber has received his regular supply of Turnip and other SEED required for the season, which are fresh and genuine:

PURPLE TOP RUT' BAGA TURNIP.
LARGE ENGLISH NORFOLK TURNIP.
LARGE WHITE GLOBE TURNIP.
EARLY FLAT DUTCH TURNIP.
RED TOP FLAT TURNIP, &c., &c.
July—3t J. H. SERVICE.

MERINO RAMS FOR SALE.

THE Subscriber offers for Sale several full-blood MERINO RAMS. Having reduced the number of my flock, I have more rams than I need. They are from two of the best flocks in New York, and their fleeces, both in fineness and quantity, running from 9 to 14 lbs.

July—tf J. B. JONES, Birdsville, Burke co., Ga.

A RARE CHANCE

For Amateurs, Market Gardeners, or Private Gentlemen.

TO BE SOLD, a Seven Acre TOWN LOT, adjoining the City of Austin, Texas, 900 yards from the Capitol, cornering on College Hill, on which we expect, very soon, to have a College established. The scenery splendid. About three acres of rich Creek Bottom, the remainder good Upland, with a beautiful situation for building upon, in full view of the Capitol, Treasury and Land Office. A never failing stream runs across the lower end of it, in which is an excellent fall for a hydraulic ram, by which the whole bottom can be irrigated. The entire is surrounded by a substantial fence; a miniature Nursery just commenced, and in a high state of cultivation; a Yard fenced off and a small Frame House built, with a Well adjoining, and a Stable erected. The whole to be sold on reasonable terms, with all the improvements thereon, and possession given at any time the purchaser may arrange for. Apply, by letter or otherwise, to the subscriber, on the premises, or to Raymond, Freeman & Co., Real Estate Brokers.
WM. DAVENPORT.
Austin, Texas, March 20, '55. June 5—

SCOTT'S LITE GIANT CORN AND COB MILL.

NO. 3, warranted to grind 15 bushels per hour with one horse, price \$65 all complete, ready to attach the horse. No. 4, grinds 20 bushels per hour with two horses; price \$75.

CARMICHAEL & BEAN, Agents,
Augusta, Ga.

April 5—City

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., SEPTEMBER, 1855.

NO. 9.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

1855! TENTH FAIR OF THE SOUTHERN CENTRAL AGRICULTURAL SOCIETY!

To be held in Atlanta, Ga., on the 11th, 12th, 13th
and 14th of September, 1855.

REGULATIONS OF THE FAIR OF 1855.

Individuals who will pay twenty-five dollars shall become life members of the Society, which entitles them, with the immediate members of their families, to admission at all times to the Fair Grounds—to all future publications of the Society, and to compete for premiums without charge.

Individuals paying two dollars shall be members for one year, and exhibit articles without further charge, and have free access to the Fair Grounds during Fair week.

On Tuesday and Wednesday of Fair week—the days for examination by the Judges—the public will be admitted for \$1; Thursday, 50 cents; Friday, 25 cents. Tickets to be delivered to the gate-keeper on entering.

Children under twelve years of age will be admitted at half price.

The pupils of charitable institutions will be admitted free.

All Editors in the Southern States are invited.

Other State Agricultural Societies and Institutes are requested to send Delegates to the next Annual Fair of this Society, to be held at Atlanta, September 12th, 13th, 14th and 15th, 1855. Such Delegates will be presented with a badge which will entitle them to the privilege of the Grounds.

RULES FOR EXHIBITORS.

SPECIAL NOTICES.

All exhibitors at the Fair must pay \$2 and have their animals or articles entered at the Secretary's office before taking them into the enclosure. All who intend to compete for the premiums of the Society, must have their articles on the ground and entered at the Secretary's office, at or before 5 o'clock, on Saturday evening, the 8th of September, without fail; so that they may be arranged in their respective departments, and in readiness for examination by the Judges on Tuesday morning, the

11th of September, at ten o'clock. *Animals* may be entered at any time previous to nine o'clock, on Tuesday morning.

The regulations of the Society must be strictly observed by exhibitors, otherwise the Society will not be responsible for the omission of any article or animal not entered under its rules.

No article or animal entered for a premium can be removed or taken away before the close of the Exhibition. No premium will be paid on animals or articles removed in violation of this rule. All articles and animals entered for exhibition must have cards attached, with the number as entered at the Secretary's office; and exhibitors, in all cases, shall obtain their cards previous to placing their articles or animals on the Fair Grounds.

All persons who intend to offer animals for sale during the Fair, shall notify the Secretary of such intention at the time of entry.

Special attention is required from competitors to the requisitions of the Society upon Field Crops, Fat Cattle, Hogs and Sheep, Dairy and Household Department, Pork, Bacon, and Beef; for full written statements as required under each department; as they are important to the Judges in the several classes before their final decision.

The Executive Committee will take every precaution in their power for the safe preservation of all articles and stock on exhibition, and will be responsible only for loss or damage that may occur during the Fair. They desire exhibitors to give attention to their articles, and at the close of the Exhibition to attend to their removal.

INSTRUCTION TO THE JUDGES,

And the Superintendents of the Different Departments.

The Chairman of Committees selected for the next annual Fair are requested to report themselves to the Secretary upon the grounds of the Society, on Tuesday morning, September 11th, 1855.

In no case must the Judges award a special or discretionary premium.

The Judges on animals will have regard to the symmetry, early maturity, thorough breeding, and characteristics of the breeds which they judge. They will make proper allowances for the age, feeding, and condition of the animals, especially in the breeding classes. They are required not to give encouragement to over-fed animals.

No stock of inferior quality shall be admitted within the Grounds; and if any shall by accident be admitted, a committee shall be appointed to examine and rule out of the Grounds all below a medium grade.

The animals to which premiums shall be awarded, shall be led up for exhibition at the delivery of the premium, and so with other articles as may be convenient, and after or

before the delivery of the premium, each animal which shall have taken a premium, shall be designated by some badge of distinct on, and led into the ring and around it for exhibition of its superiority and high quality to the assembled crowd.

N. B. No person whatever will be allowed to interfere with the Judges, during their adjudication; and any person who, by letter or otherwise, attempts an interference or bias from misrepresentations with the Judges, will be excluded as an honorable competitor.

The Superintendents will give particular direction to all articles in their respective departments, and see that all are arranged as near as may be in numerical order, to lessen and facilitate the labors of the Judges in their examinations.

The Superintendents will attend each set of Judges in their respective departments, and point out the different articles or animals to be exhibited; will attach prize cards to the articles, or flags to the successful animals after the Judges' reports shall have been made up and delivered to the Secretary.

REPORTS OF JUDGES.

The Judges will be expected, in all cases, to withhold premiums when the article or animal is not worthy, though there be no competition. Blanks will be furnished the Committee to fill up in making their reports.

Animals having received premiums of the Society at previous exhibitions, will not be allowed to compete for prizes again in the same class.

FORAGE FOR STOCK.

There will be a Forage Master on the ground, who will furnish grain and forage at market price, to the owners of stock.

Stalls will not be furnished upon the Grounds of the Society for unruly or dangerous animals.

AWARD OF PREMIUMS.

The premiums will be awarded from the Executive stand, at 10 o'clock on Friday morning.

SALES OF STOCK.

The Auction Sale of Live Stock will take place on Thursday at 11 o'clock, A. M.; but the animals sold cannot be removed from the grounds until the close of the Exhibition.

POLICE.

A well regulated Police of the Society, aided by that of the city of Atlanta, will be on the grounds during the entire Exhibition, to preserve order.

EXECUTIVE COMMITTEE.

President—Hon. THOMAS STOCKS, Greensboro', Ga.
Vice Presidents—Hon. M. A. COOPER, Etowah, Cass Co., Ga.; Col. P. M. NIGHTINGALE, Albany, Ga.
 Col. J. M. DAVISON, Woodville, Georgia.
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 BENJ. E. STILES, Esq., Savannah, "
 WM. M. D'ANTIGNAC, Esq., Treasurer, Augusta, Ga.
 Dr. JAS. CAMAK, Secretary, Athens, Ga.

All persons having business with the Society, or wishing information not here furnished, will address the Secretary at Athens till the first of September. After that time, at Atlanta, Ga. JAMES CAMAK, Secretary, Athens, Ga.

An acre is 4840 square yards, or 69 yards, 1 foot. 8 1-2 inches each way; and 2 acres, or 8680 square yards are 93 yards, 1 foot 2 inches each way; and 3 acres are 120 yards and a half each way.

A PLEA FOR AGRICULTURAL EDUCATION.

SOMETHING over ten years ago, the writer, as Chairman of the Committee on Agriculture in one branch of the New York Legislature, embodied some facts and suggestions on the subject of educating practical farmers, which having been verified by subsequent experience in that large and populous State, may not be unworthy of consideration by Southern planters. The Report from which we cite may be found in the sixth volume, second series, of the *Genessee Farmer* for 1845. At that time the best Genessee wheat sold in Rochester at from 75 to 80 cents a bushel; corn at from 37 to 40 cents, and potatoes at from 18 to 25 cents. Since then, such has been the increase of population, and decrease of the elements of food and raiment in the cultivated land of the State, operating with other less potent influences, that wheat is now selling in Rochester at \$2.70 a bushel; corn at \$1.10, and potatoes at about the same price. Ten years ago, a poor man working out by the day or month on a farm, got a bushel of wheat for a day's work; now he is compelled to give three day's toil for the like quantity of grain or flour made from the same. In the purchase of potatoes, the difference is equally great, and against unscientific labor.

These are pregnant facts, and are by no means peculiar to New York, in their most significant aspects. In the document referred to we labored to show, among other things, the essential difference between working to produce property, as by agriculture, and seeking only to acquire it, after it has been called into existence by the productive industry of others. As a general thing, the latter class is better educated than the former, the producers, who rarely study the science of *keeping and using* property; hence, it is extremely apt to slip out of their possession. The argument being addressed to laboring farmers, run in this wise:

"Surely the toiling husbandman *needs*, if he do not *deserve*, as many good meals, as much good clothing and as fine a house as one that merely studies to acquire, not produce, the good things of this world. Nevertheless, the fact is notorious, that the great body of our rural population somehow contrive to work a little *harder* and fare a little *poorer* than any other class in the community.

"We learn from reliable statistics that paupers increase among us, relatively, faster than population. The number that live from hand to mouth, only one step from the poor house, is increasing with fearful rapidity. There are already more than five hundred thousand people in this State wholly dependent on their daily labor for their daily bread. If the Legislature will do as much to teach the producing classes how to *keep and enjoy the entire proceeds* of their honest toil, as it does to teach non-producers how to exchange their shadows for the working man's substance, nine-tenths of our growing taxes for the support of the poor and the punishment of crime, will cease forever. According to the official report, the direct State tax for the year 1844, was \$1,243,100. This will soon be \$8,000,000, unless we cease to manufacture paupers, criminals and needless litigation."

Our Southern readers will generally admit that there is something wrong in a system of popular education which yields as a part of its natural fruit, increasing crops of paupers, criminals, and litigation. Now, as a community consumes the fertility of its cultivated fields, and at the

same time increases its population, who does not see that it nourishes in its bosom a thousand seeds of dissatisfaction and malignant discord? After calculating with scientific accuracy the amount of phosphorus in a pauper's brain and nervous system, and the quantity that must yearly enter his mouth taken from the soil, we predicted long ago the present Know Nothing movement against foreign laborers and competitors in New England and New York. The lack of science, and the wrong done to arated land, are the true sources of a thousand social and political evils. These have their living roots in the Earth, and no where else. Looking with deep solicitude to the future wants of the children attending our common schools, we said:

"It is not far from the truth to say, that 400,000 of the 700,000 children now attending our common schools are destined to become practical operatives in the great art of making *something* into grain, grass, roots, milk, butter, cheese, fat, lean meat, bone, or some of the numerous other products of rural labor. Where that something can be found, and *how* the raw materials of all cultivated plants should be combined, so as to give the largest return for any given amount of capital and labor, are problems in practical husbandry, which science alone can solve. The term *science* is but another name for knowledge. It is, however, usually limited in this connection to the systematic investigation of the laws of nature; and of all men, the practical farmer is most interested in understanding and obeying these wise and salutary laws.

"To make an acre of wheat that will yield 20 bushels, the plants must have twelve pounds of phosphorus. To purchase that amount of this substance, which forms one of the constituents of the human brain, at a druggist's shop, will cost \$24. At present prices, the phosphorus and ammonia annually thrown away in the solid and liquid excretions of man and his domestic animals, in this State, are worth some \$20,000,000.

"All the farmers of the Empire State should rise up as one man, and insist that the science of good husbandry and that of keeping property, shall be taught in all their common schools. The same mental culture which will enable an honest tiller of the soil to double its products, and double the value of his better directed industry, will also qualify him, in a good degree, to keep and enjoy a much larger portion of the nett proceeds of his more skillful industry.

"Science is the greatest leveler in the world; but unlike the leveling of ignorance and brute force, it ever levels *upward*. It takes the highest point of mental attainment already achieved for its standard; and then wisely and humanely elevates all below up to that standard. The object is to make the triumph of *mind over matter* universal and complete."

This object is as important at the South as it is at the North; and, therefore, the argument is not out of place in the *Southern Cultivator*. Nor is the South entirely free from the tendency to overstock the professions of Law and Medicine, Mercantile, and other unproductive (in one sense) pursuits. Hence, the following historical facts, and calmly considered suggestions, may be worth the space they will occupy:

"It is now 26 years since the friends of agricultural improvement first made a vigorous effort to establish an agricultural College in this State. Your Committee have before them an essay published in 1819, in this city, (Albany) of 42 pages, advocating such an institution with unanswerable arguments. Within the last 26 years, there

has been taken from the public treasury about \$200,000 to prepare candidates for legal honors to study successfully the science of law. We have also four well endowed Medical Colleges, now drawing \$5,500 a year besides. Indeed, we have so long paid a large bounty on all branches of unproductive industry, so-called, that no young man of honorable ambition will consent to toil and sweat, and burn in the sun on a farm, for \$12 a month, when as a clerk in a store, a bank, a broker's office, or as a student in a doctor's or lawyer's office, he can expect soon to command five dollars to one of the industrious farmer, and with one fifth of the severe bodily labor. Is it possible for all ambitious young men to become professional gentlemen, and not render these professional pursuits utterly valueless? If learning and science are the great highways to honorable distinction and public favor, why deny these advantages to those who do more than all others to feed and clothe the whole community?"

Planters, think of the education of your sons, and wisely determine what position you will have them occupy in an age of advancing agricultural literature and science. Nothing is easier than to give them an elevated standpoint, whether for making and keeping property, or commanding suffrages and applause of their fellow-citizens, in after-life. Receive not unkindly this hint, it is more than possible to neglect human cultivation. Such neglect will tell injuriously, both on a family, and the public at large. Nothing would strengthen Southern interests so much as the more general and thorough education of those who own the soil. It is a trite saying that "knowledge is power;" but truism as it is, there are thousands of voters, and sovereign rulers, who do not understand its bearing on the educational institutions of the country. The improvement of these is, somehow, a most difficult reform to accomplish, although, confessedly, one that is much needed. What is wanted, in addition to all that the public now have, is the plain and effective application of science to all the industrial arts practiced by civilized man. Such an application of all the knowledge extant, would detract in no respect from its dignity or honor, while it would utilize it a thousand fold. Place science in the heads and hearts of the people, instead of keeping it out of their reach, and they will love and cherish it, as parents do their own children. The real difficulty lies in reaching the masses. It will ever give us pleasure to meet them at their county Fairs and county Courts, and talk over the true interests of the human family, whether in cultivating man, or the earth from which he was taken, and to which his dust must return. If it were possible to talk to the whole people, and explain at length what agriculture most needs at the South, to put to shame Northern fanaticism, we feel confident that our humble plea for agricultural education would not be in vain. A kind Providence smiles upon Southern tillage, and proclaims the duty of planters to take the lead in the professional instruction of agriculturists on this continent. Do you not feel the inspiration which forbids you to follow the *Do-Nothing*s at the North, who are fast dividing all their moral and physical powers between fifty conflicting implacable factions? We have studied these factions pretty closely, and might do the public a worse service than to analyze and describe them, but we will not. It is not our mission to complain of popular folly anywhere; but a

house divided against itself is in a bad way, whether North or South.

On the important question of promoting agriculture, there is no good reason why public sentiment at the South should not be perfectly harmonious and united. It is so obviously the paramount interest on which all others depend for support, either directly or indirectly, that the only debatable ground is the fact whether any proposed measure will truly benefit Southern tillage and husbandry or not. And to this simple, this plain test, we desire to see agricultural education brought. In this matter, no one has a right to expect wonders, much less a miracle. Such expectations would most certainly be disappointed. A good crop of useful knowledge was never made by persons so full of excitement as to jump to their conclusions. Our most useful institutions grow up from small germs, like noble forest trees, which have extended both their roots and branches, little by little, every summer for one or two centuries. Such institutions are really worth having; but mark, they should *grow*; else they are like dead trees which every year become more unsound, and less valuable. No college should be permitted to fall into such a condition. Its friends had better engraft new scions upon some of the most flourishing limbs, and add a good mulching to protect the roots. It is wise to rejuvenate, or reform, but inhuman to destroy. Gladly shall we assist in any way in our power to build up and strengthen the educational institutions of the South. They need more funds, more pupils, and more able and earnest teachers. In this way they will happily exhibit substantial progress, and solid growth. Whatever the people desire to learn, and have their children learn, educational institutions should teach. We believe they wish to learn the principles of agriculture and of the mechanic arts; and therefore we advocate the study of these branches of knowledge in schools or universities adapted to such utilitarian objects. Our republicanism induces the belief that there is nothing in learning, nothing in science, which is either too good or too high for any common citizen to command if he pleases.

L.

TURPENTINE.

HINTS FOR THOSE ABOUT TO ENGAGE IN ITS MANUFACTURE.

SITUATION.

SELECT your plantation as near a Distillery as you can; but you may do a very profitable business 6 or 7 miles off, if the country is favorable for hauling. If the Distillery is on a river, Turpentine may be hauled two or three miles and rafted down forty or fifty miles, cheaper than to haul to the Still over six or seven miles. Yet persons already settled on thin pine lands, can do better to make Turpentine and haul it ten or twelve miles, than at anything else they make for market.

TIMBER.

The best trees are young, thriving, on pretty good soil, of quick growth, having the most sap-wood. If found on low, level or moist lands, they will yield all the better. Dry seasons are unfavorable for a large crop of Turpentine, and, of course, trees on lands that suffer easily from drouth, are least profitable. Old Yellow Pines run badly, and are only worth boxing when standing amidst better timber.

The thicker the growth stands the better, as close forests are less injured by hard winds than those more open, while the hand has less ground to walk over in attending his task. Forests that will not afford a task of 12,000 boxes on 200 acres or less, are hardly worth working, unless they are very near the still, or water carriage to it.

BOXING.

As the future profit of the business depends chiefly on doing this part of the work well, let it be carefully attended to, observing the following instructions:

1st. In our climate [Florida and Southwestern Georgia] this work must be done between the 1st of November and the 1st of March, or a little later if the spring is backward and cold, and the Turpentine does not begin to run.

2d. The boxes must be cut *low down*—in small trees within 6 or 8 inches of the ground, and 10 or 12 inches in large trees. This will be at the swell of the roots, where the sap-wood is deepest, and the tree least weakened by the cut, and because the drip is more certain to fall into the box when it is cut in the projecting wood. And for this last reason, when the tree is not upright, a box must never be cut on the side to which it leans.

3d. The box should be from 8 to 15 inches long, measuring across the tree, according to its size. The lower edge or rim of the chop must be a level cut, very smooth, and have a down slope inwards of 2 or 3 inches below the outer edge. The depth from 3 to 4 inches, capable of holding a quart or more, unless in a small tree. As a general rule, the cut should extend very little into the heart-wood.

4th. The size of the tree determines the number of boxes it will bear and keep healthy. Trees under a foot thick should have but one box; those from 12 to 20 inches thick, two boxes, and never more than three in any tree. Of course, where the trees are scattering it may be better to cut more boxes, even if the trees do not last as long, than to lose too much time with your hands.

5th. The task for prime experienced hands is from 450 to 500 boxes a week, or 75 to 80 a day. And some expert hands will gain a day and do their work well. Such hands should be encouraged by receiving pay for extra work. But most beginners will not cut at first more than 50 boxes a day, and there is nothing gained by tasking them too high, until they have got well used to the proper shape and size of boxes.

CORNERING.

As soon as you stop cutting boxes, the hands should be set to cutting corners to them. This is done by a straight cut four or five inches up the tree from each corner of a box, and is usually done with two blows of the axe, taking out a chip half or three quarters of an inch deep, which makes a channel to catch the Turpentine at the corners of the box, and serves as a guide for the chipping afterwards. A hand will corner 500 or 600 boxes a day. The Turpentine from the faces and corners of new boxes will fill them, without further work, for your first

DIPPING.

This part of the business generally begins about the first of April, a little earlier or later according to the season. But before proceeding to dip, or even to corner your boxes, each task, where there are no natural boundries, should be marked off by blazing a line of trees. And every task should be further divided by rows of stakes, fifty yards apart, crossing it both ways, from side to side, which will cut it up into squares of about half an acre. Without this the overseer of several hands cannot possibly inspect their work with any accuracy; nor can the hands, however faithful, avoid skipping a great many boxes in *cornering, chipping and dipping*.

1st. Before you begin to dip, place your empty barrels, 35 or 40 to the task, at convenient distances, all ready to receive the Turpentine.

2d. Each hand will require two buckets, holding 4 or 5 gallons, so that while one is dripping into the barrel he can work with the other and lose no time. The implement for dipping is made of iron or steel, something like a trowel, with a wooden handle, the blade flat, 6 inches wide and 9 or 10 long, with a rounded point, thin at the edges, and a quarter of an inch thick in the centre, and joining the handle.

3d. Dipping must commence as soon as the boxes are pretty well filled, charging the hands to watch them, while going over their tasks to cut corners or to chip, as trees run very unequally, and many will overflow before the rest are full.

4th. The number of dippings in a season vary from 4 to 7 as the extremes. Below 5, during the first 2 years, is looked on as poor, and 6 as very good. An early or backward spring or fall—long drouths during which the trees almost stop running—or heavy driving rains which fill the boxes with water and float out the Turpentine—all have their effect on the number of dippings—which depend otherwise on the frequency and care with which chipping is done. As the plantation grows older, and the chipping extends higher up the trees, you get fewer dippings of soft Turpentine, and a greater proportion of hard or scrape.

5th. It is not usually necessary to gather the scrape separately, until the second winter, after the boxes stop running. It will then be nearly equally in bulk to 2 dippings. After that it must be gathered every winter, the bulk increasing the longer the trees are tended.

6th. For collecting the scrape, instead of buckets, it is better to use a box 15 or 16 inches square and 10 inches deep, supported on two short legs, so as to rest against the tree. The best implement for gathering scrape is a socket spade, so that the length of handle can be varied with the height of the work. The hard scrape will require to be trodden into the barrels.

7th. A hand should dip 1,800, to 2,000 boxes a day, or fill 5 or 6 barrels, so as to get over his task in 6 or 8 days. It will require more time to collect the hard Turpentine.

CHIPPING.

Next to careful boxing, the length of time that your trees will continue to yield, will depend upon the manner in which chipping is done.

1st. The instrument used is called a "hacker" or "shave" from its resemblance to a cooper's round shave, only that the cutting part should be shaped to a rounded point, an inch, or three quarters in diameter, and be supported on a strong spike, to be inserted in a handle of convenient length, according to the height of the chipping.

2d. Take care that the chip extends across the tree no wider than the box, and for new or awkward hands it will save much waste to have perpendicular lines drawn up the tree from each corner of the box.

3d. From each of these lines the chip should be cut in a down slope towards the centre of the box. Each fresh chip to be cut at the upper edge of the old one, about a quarter of an inch deep into the wood. A narrow chip or cut will bleed as freely as a wide one—half an inch is sufficient. And by this means your trees can be worked longer. If trees are skillfully chipped they will last 8 or 10 years.

4th. A good hand will chip over his task once a week. And, as it is important to have it done by the strongest and most expert hands, these should be kept at it regularly through the season—while women or inferior hands can dip very well. One hand can dip four tasks, while the three best hands are kept busy chipping, and should go over the whole four or five times between each dipping. On this plan the boxes first full can be attended to without interrupting the chippers.

HAULING.

One hand strong enough to load, with a pair of good mules and suitable wagon, will haul the Turpentine dipped by ten hands, an average distance of three miles—with spare time for hauling provisions, empty barrels, &c. And in the winter can be employed in hauling barrel staves, plowing in oats, or preparing ground for early peas and potatoes—so as to provide a large part of their own forage, for himself and team.

BARRELS.

1st. The barrel is made 32 inches long, including the chimes, and the head about 17 inches across, with a little bulge in the middle. The staves and heading of pine, to be three-quarters or seven eighths of an inch thick, secured with six strong wooden hoops.

2d. A barrel of Turpentine must weigh 280 pounds, and any over or under-weight is added or taken off, as the case may be, in calculating all sales. No allowance for weight of barrel.

3d. A cooper's task, when working by the day or month, is five barrels. His price twenty to twenty-five cents a barrel for making when all materials are found him—and when he finds all, from thirty-one to thirty-seven cents a piece.

4th. Heading and staves of heart pine are worth \$5 a thousand. Sap staves one-fourth less, as they are only fit to hold the hard Turpentine or scrape. They should be got out and hacked up and dried two or three months before being worked up. Hoop poles, about 6 feet long, of hickory, white-oak or water-oak, are worth 20 to 25 cents per hundred, delivered.

5th. In a gang of hands getting Turpentine, every fifth man may be a cooper, and will be employed the year through in providing his own materials and keeping the others supplied with barrels.

GUARDING AGAINST FIRE.

The evil consequences of getting a Turpentine plantation on fire are so great, as to justify the labor of hoeing around the boxes, so as to clear away all the grass and pine straw to a distance of 4 or 5 feet. This will employ a hand four or five weeks in the winter. The State ought to protect this important interest by enacting severe penalties against those who set out fire where it can extend among trees boxed for Turpentine.

GENERAL REMARKS.

The Turpentine business is considered a very healthy employment for hands. It may be carried on with little capital, on lands too poor for cultivation, and is, therefore, well suited to persons of small means. If there is one hand, in the poorest family, able to cut boxes and chip them afterwards, the dipping can be done by women and half-grown children. A poor family living near a Still or river may make something, even if they hire their boxes to be cut, buy their barrels, and hire the hauling.

On the other hand, no business makes better returns for common labor, take one year with another, not even the culture of cotton and tobacco, especially when the amount of capital employed is taken into consideration. A prime experienced hand, in a plantation newly opened, has gathered \$600 or \$700 worth of Turpentine in a year, leaving a nett sum of \$400 or \$500, after all deductions for barrels, hauling, provisions, &c. Two hundred dollars per hand, clear of all expenses, including wages to an overseer, is a very moderate result for an average lot of hands.

The usual price for cutting good boxes is \$1 per hundred, and food for the hand.

Twelve thousand boxes are an average task, in chipping and dipping. Extra prime hands have tended as high as fifteen or sixteen thousand, but ordinary hands will not do justice to more than ten thousand.

Good trees will yield about three barrels to the thousand boxes at each dipping, for the first three years, one-sixth of this being *hard* or *scrape* the second year, and one-fifth the third year. The proportion of *scrape* increases as the chipping extends higher up the tree, until it makes half the crop, while the dippings of *soft* Turpentine will be reduced to three or even two a year. It will, therefore, be necessary to add some new boxes to the task every year, after the fourth, to keep up the profitable business. In young, thrifty trees this may be done without increasing the bounds of a task, if the number of boxes was limited at first, as previously directed.

Virgin dip is the name given to all Turpentine gathered the first year from new boxes. Although the first three dippings make much the brightest and best rosin, and on this account is worth fifty or seventy-five cents a barrel more than

Yellow dip, which is the name of all soft Turpentine taken from the boxes after the first year.

Hard or *Scrape* is the name for the Turpentine which hardens on the face of the chipping and never reaches the boxes. This makes a pretty fair rosin, but yields not more than a third of the quantity of spirits, and is worth about half price.

The evaporation of spirits from all soft Turpentine is very rapid in hot, dry weather; and this makes it important to dip and deliver it at the Still without unnecessary loss of time.

Virgin dip will yield about five and a half gallons of spirits to the barrel (of 280 pounds,) for the first three dippings, and from five and a half to six gallons later in the season.

Yellow dip, if delivered early, will turn out six to six and a half gallons. The *scrape* rarely makes as much as three gallons, very often not more than two or two and a half to the barrel.

On an average, all kinds will make two barrels of rosin from three of raw Turpentine.

The Distiller, therefore, will have one-third of his barrels surplus, which, with slight repairs, will serve as well as new ones for future dippings.

When Virgin dip is worth \$2.50 or \$2.75 a barrel, Yellow dip is worth about \$2, and the *Scrape* about \$1.25 a barrel.

To justify the distiller in paying the above prices, spirits of Turpentine should be worth 40 cents a gallon in the New Orleans market, upon the supposition that the entire expense from the Still does not exceed 8 cents a gallon on spirits, and 40 cents a barrel on rosin. When spirits are selling in New Orleans at 36 cents, the raw article is worth 20 cents a barrel less, at the Still, at the same rate of expense in sending the manufactured article to market.

The distiller incurs great expense in the single article of spirit barrels. These must be iron bound, made in the best manner, of seasoned white-oak, and well coated within with glue, to prevent evaporation. They should contain from 40 to 45 gallons, and when ready for use cost little short of \$2 a piece. As there must be one spirit barrel provided to every seven of soft Turpentine, the demand for these barrels will of itself open an extensive new branch of business. Let these, by all means, be made at home.

A word more at the close. It is said above that a Turpentine plantation will last 8 or 10 years. This is meant for Florida and Southwestern Georgia. In North Carolina with careful working, it lasts 12 or 14 years. And then begins the business of making Tar from trees exactly prepared for it, by this previous culture. This is nearly as profitable as making Turpentine, and will furnish employment for several years longer.

REMARKS.—We are under particular obligations to

JOHN M. POTTER, Esq., of Decatur county, Ga., for a pamphlet containing the foregoing information. We do not know who is the author, but doubt not the article will be acceptable to many persons seeking information on this important subject.—Eds.

CROPS IN MISSISSIPPI.

EDITORS SOUTHERN CULTIVATOR.—The July number of your valuable journal is at hand, and as you request some information about the crops in the different sections of the country, I have concluded to drop you a line in compliance therewith.

At this time we are receiving plentiful showers of rain every few days. The corn crop has generally been laid by and it will be a good crop, judging from present appearances. My neighbors generally have put in larger crops of corn, peas, potatoes and vegetables than usual. I think that there will be fine crops of peas, potatoes and pumpkins, also. The cotton crop is doing tolerable well just now, but there cannot be a full crop, as not more than one-tenth of the planters in all this region of country have got good stands; some have not finished scraping yet. I hear some of our oldest planters say that it is impossible, let the seasons be ever so propitious, to make a full crop.

But I presume you know, Messrs. Editors, that the extent of the cotton crop cannot be pronounced upon until gathered and baled. Last year the seed was heavier than the lint, and we were all disappointed in our calculations. Those young writers who speak so enthusiastically of the "beautiful growing crops of cotton," are not aware, perhaps, that by this kind of praise, they are creating an impression that will ultimately prove a losing business to them, in lessening the price of cotton. I am a lover of truth, but all men of experience know that appearances in the yield of cotton are very deceitful. No man can, with any degree of certainty, predict what will be the yield of his growing crop. Yours, T. R.

Cottage Home, Jefferson, Co., Miss., July, 1855.

"GREEN HORN" WAXETH HYPER-CRITICAL AND PARTICULAR.

EDITORS SOUTHERN CULTIVATOR.—I am a pretty regular reader of several agricultural journals, and frequently in their perusal have suggested to my mind certain thoughts and inquiries, which move me strongly to write something myself, but I have never yet brought my self-confidence fully up to the point. There is a kind of writing, however, which appears to be a pretty easy-going thing, and withal quite free—I mean the *fault-finding*—so I have determined to try my hand for once, and take that channel.

I find that many Planters complain of the introduction of "scientific highfalutin," into farmers' readings, because, say they, farmers are not presumed to be "high larn't," and able to understand it. Well, there may be many just occasions for such complaint. As where unusual, or foreign language is used, while that which is native, and in general use is convenient; but when this fault is carried only to the use of terms or names which are strictly technical or scientific, though the reader may not understand them on sight, he can (if he can read at all and has such books as all reading men ought to have) learn or find out, easily enough, their meaning. But worse than this is the use of the unscientific *low-falutin*, if you will allow the expression. Many families and neighborhoods have common names for things, plans of work, &c., which are in every-day use amongst themselves, but which, in another State or region, are more mysterious than Greek or Hebrew, and they are not in the books.

So that many very smart journal writers waste their intended usefulness by using their domestic or plantation vocabulary, which never reaches the comprehension of the reader.

But I set out to complain of another fault amongst these writers, which, being a *practical*, or rather *impracticable* one, has frequently bothered me not a little. I allude to the want of *exactness* and *fullness* in giving descriptions, and especially in telling us how, to do things. Your correspondent, "K.," gives a pretty fair instance in his reference to WARD'S Plantation Gate. And many could be given from almost every number of these journals. MR. NELSON, for instance, is one of your most practical and practicable of correspondents, and when I saw your note of thanks to him for the "couple of bottles," and his "very clear and practical article," on Vine Culture, &c., I eagerly devoured it (not the wine) as one in which I felt much interest. When I read, that the "*produce of a quarter of an acre was two hundred gallons annually*," oh, how my mouth "watered;" visions of demijohns, goblets and all that, clustered around my eyes so thickly that I could scarcely see the paper to read the "simple" plan of making it, which I intended certainly to appropriate to practical use. But I read on devoutly, "the juice * * * after being filled (with what?) into a cask, so as to leave space for fermentation (how much?) is left to itself about 10 days, when the process is ceasing. Some sugar is then added (how much sugar is *some*?) the cask is filled up (with what?) and the bung closed tight. After some months (two or ten?) the wine is drawn off, &c."

Now, here was a "quandary." After all, I must learn to make my wine by experiment, in which my grapes will be wasted, as well as my time and patience, and my taste so soured with my vile production as to disgust me, I fear, with the business. I have instanced this article no as a full specimen of the class I complain of, but because it is so much better than many as to call forth your commendations for its *clearness* and practical character. "A friend at my elbow"—that convenient individual—suggests that you probably read the "article," while *canvassing* that "couple of bottles," and so expressed yourself under the influence of an exciting *discussion*, &c., but the "allegation was emphatically repudiated."

I have long had in my possession a "certain cure" for "the fever," which I did not feel competent to fix up for publication, but have finally concluded to try for the benefit of the ignorant and afflicted—two large and unfortunate classes of our great people. It is from the manuscript of one of my *strong-minded* neighbors:—"Take a handful of *boneset*; put it in a *skillet* of water; boil it a *little while*, then set it off and let it steep till you begin to give it, and then give a *right smart dose* every now and then."

Now, Messrs. *Cultivator*, if you think that is sufficiently "clear and practical" to profit or puzzle (either will do) your readers, please insert it in your valuable journal.

Your constant reader,

GREEN HORN.

Lowndesboro', Ala., July, 1855.

P. S.—My wife wants to know (in getting the "perfume of flowers," according to the process given by the *Scientific American*, and quoted in your last) how much oil must be in the jar. It says three parts, but how much is "a part?" If it said three parts of oil and one of flowers, we could understand it, but the *flowers* are to be put into a jar three parts full. Are the parts 10ths, 6ths, 4ths, or what? In short, how full is the jar? My little girl says she knows it's *three-thirds*. G. H.

REMARKS.—"Green Horn" is not so "verdant" as his name would indicate. His strictures are well deserved and well put, and for ourselves we "own the soft impeachment" and acknowledge the truth of everything out the

insinuation respecting the influence of those "two bottles" upon our judgment. We thank him for repudiating that "allegation" and dare that "elbow friend" of his to the proof. A little good-humored raillery often effects more than solid argument, and "Green Horn's" pen should not be allowed to lie idle.—Eps.

FISH PONDS IN SOUTH CAROLINA.

A correspondent of the *Fairfield* (S. C.) *Herald* says:

Mr. Editor; Seeing a statement in the *Soil of the South*, taken from the *Southern Cultivator*, that a Mr. Hill, living near Augusta, Georgia, had succeeded in raising fish in a pond of his own construction, I concluded, as Van Buren once said of General Jackson, "to follow in his footsteps." Accordingly, having within a few hundred yards of my house a favorable spot, (a small narrow gorge in the hill with several bold springs breaking forth) I commenced in December last, with one fellow to dig out in the upper side and throw up a dam on the lower, so as to enclose a square space of seventy by forty five feet. This I accomplished at a cost of twenty-five dollars. In the deepest part of this pond, I have four feet of water, and two in the shallowest. About two months since I placed in this pond some six or seven hundred perch and a few small brim and mormouths. The latter being very small, will not deposit their eggs till next spring. The perch, however, have already commenced bedding and hatching, and the pond is now literally alive with thousands of the finny tribe, from those scarcely perceptible to the naked eye, to those an inch long, &c. These fish I feed with crumbs of bread, hommony, shreds of meat, and the entrails of fowls, pigs, birds, rabbits, &c., chopped fine.

I am very sanguine of success, and hope ere long, not only to be able to report the fact, but to furnish my table constantly with this new rare delicacy in this region.

It strikes me, Mr. Editor, that every planter ought to have this necessary (for it will prove a necessary as well as luxury to have an abundance of fresh fish always at command) about him, especially when it can be had, for so small an outlay of labor and money.

As the propagation of fish, is just now, exciting a good deal of attention, will you be so good as to publish such facts occasionally, as you may find in your exchanges, calculated to throw light upon the subject, and oblige

A SUBSCRIBER.

P. S. If any more of your subscribers are disposed to try their luck in this line, I will take pleasure, if I succeed, in furnishing them next spring with a start from my pond.

CURE FOR POLL EVIL IN THE HORSE.

EDITORS SOUTHERN CULTIVATOR—Having been a subscriber to your valuable Agricultural paper since January last, and finding that you are disposed to insert any and every thing that pertains to the advancement or welfare of the community, I will give you my experience in curing the Poll Evil in that most valuable animal, the Horse.

Having once traded for a horse, after returning home I discovered that he had the Poll Evil. I made a large plaster of white lead and put it on; in some 6 days it dropped off itself. And all the time I owned him it never returned.

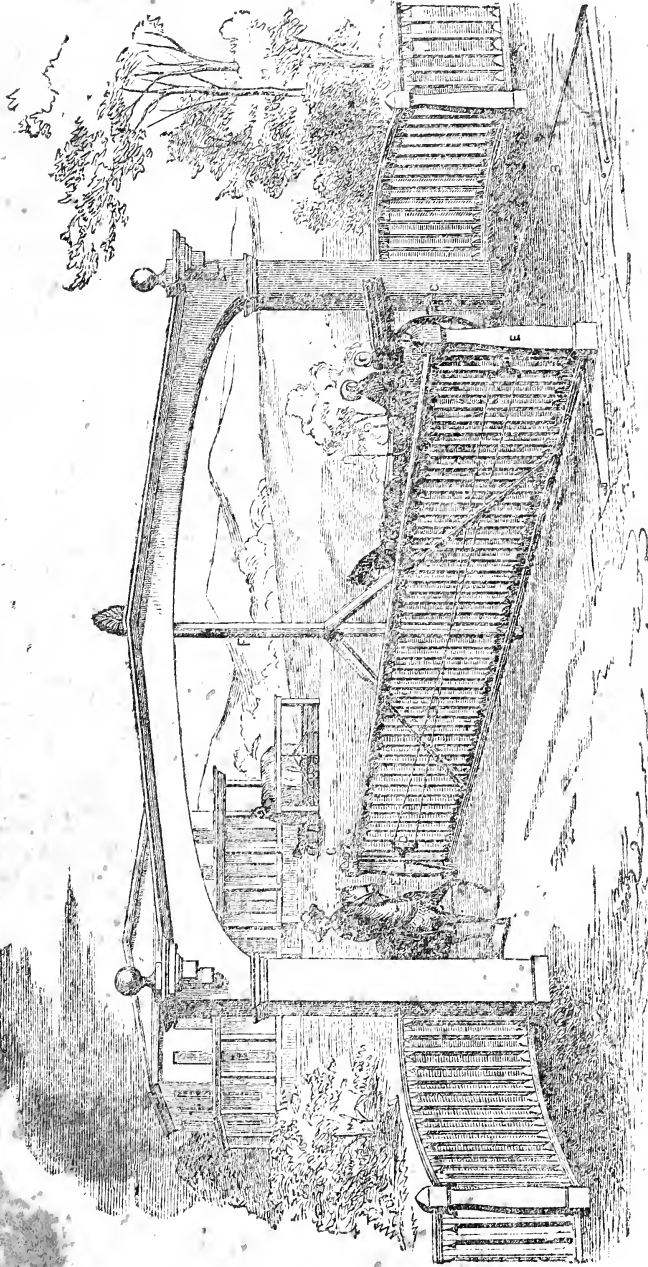
If you think this worthy of note in your valuable paper you are at liberty to insert it.

I remain yours, &c.,

LEWIS Y. FOLSON.

Gainesville, Miss., July, 1855.

Four rods are an acre, each containing 1210 square yards, or 31.785 yard or 31 yard 28 inch's each side.



WOODRUFF'S PATENT SELF-ACTING GATE.

DESCRIPTION.—Approaching the Gate the carriage wheel presses the wheel-rods or treadles, (*J*) lifts the latches by means of the lever *B*. Weights within the frame cause the Gate to revolve and latch to the posts *E*, between the tracks, the wheel passing over a treadle *D*, by the post *E*, again lift the latches, allowing the Gate to close; the latches are so connected that both lift at the same time.

Persons on horseback are not annoyed by tugging at ropes or levers, and all unpleasant stooping is avoided; they have but to touch, with the handle of the whip, the small lever *C*, on the top of the Gate and the Gate opens; in fact, the ease with which they operate entirely supercedes the necessity of small gates for persons on foot.

That greatest of all objections to self-acting Gates, the liability to be opened by cattle, is in this entirely removed. The two treadles at *J* must be pressed both at once, as pressing one alone will not lift the latch, and these are placed so far apart that the broadest hoof cannot possibly tread upon both.

The simplicity of these Gates, together with their trifling expense, cannot fail to commend them to all who would avoid the annoyance and often danger of alighting to open and close their entrance Gates.

The various modifications of which it is susceptible, admits of the most elaborate ornament, the greatest taste or neatness in entrances, as well as of plainness, strength and utility, for farming purposes.

Where a Gate already exists, and it is desirable still to retain it, these Gates can be recessed in, and made of wire or lighter materials, while the old Gate can remain open altogether, or

only during the day. For common farm Gates the frame can be low and set parallel with the tracks, as shown by the Gate in the distance, allowing high and bulky loads to pass without obstruction.

These Gates are so constructed as to be applicable to railways, when the cars are drawn by horses.

A model and drawings can be seen at No. 308 Broadway.

TERMS.—On remittance to Fowler & Wells, United States Patent Agents, 308 Broadway, N. Y., of Seven Dollars for a Plain Gate, or Ten Dollars for an Ornamental Gate, the fixtures and right of use, with printed directions sufficiently plain to enable any ordinary mechanic to construct them, will be forwarded.

An order for 5 Gates will be filled for \$1 less on each gate. An order for 10 gates will be filled \$2 less on each gate.

The *Elizabethtown Gazetteer* thus speaks of it:—Mr. Enos Woodruff, of this city, has recently received a patent for an invention of his, which, to say the least of it, is an ingenious one. It is a Self-acting Gate, simple in its construction, and can be made at a trifling expense. The Gate is so constructed that the carriage wheels, in passing over levers, open the gate, and on passing other levers on the inside close and latch it again, without the delay or trouble of stopping. These gates are proof against the ingenuity of the most unruly cattle, and cannot possibly be opened by them. A simple apparatus is attached to the gate for the accommodation of persons on horseback, or on foot, obviating the necessity of a small gate. The simplicity of these gates, the ease and certainty of action, together with their comparatively trifling expense, cannot fail to recommend them to all who would avoid the great annoyance, and often danger, of alighting to open and close their entrance gates. The invention is highly commended by the Managers of the American Institute, and other practical men who have examined it.

Fowler & Wells, 308 Broadway, N. Y., are agents for the sale of this gate, to whom all communications should be addressed.

ELIZABETH CITY, N. J., June, 1855.

Mr. Enos Woodruff—Dear Sir—It is with great pleasure that I communicate to you the comfort, convenience, and trouble-saving your Patent Self-acting Gate has afforded me. While I candidly acknowledge my prior strong doubts as to their performing in every respect as you confidently asserted, I cannot but admit my prejudices are entirely removed, and that the Gate works so well that all who have driven through (and they are many) could not but express their unbounded admiration. Indeed, I doubt whether a common gate will be used, when this one is generally and fully before the public.

ABEL S. HETFIELD.

We have already mentioned that our fellow-citizen, Mr. Enos Woodruff, has secured a patent for a self-acting gate, and we are happy to learn that it combines all the advantages that its inventor claims for it. The apparatus is very simple, not liable to get out of order, and the gate can be constructed for a very small cost, if desired. One of these gates has recently been constructed at Mr. A. S. Hetfield's "Paradise," and is worth an examination by all who have occasion for carriage-ways upon their premises.—*N. Y. Journal*.

A square mile, 1760 yards each way, is 640 acres; half a mile, or 880 yards each way, is 160 acres; a quarter of a mile, or 440 yards each way, is a park or farm of forty acres; and a furlong, or 220 yards each way, is about 10 acres.

CROPS IN WHITFIELD CO., GA.—A GOOD FARMER.

EDITORS SOUTHERN CULTIVATOR—I think I shall be benefited many hundreds of dollars by information I, and those in my employ get and have gotten from agricultural papers; and, to us, yours is of more importance than all the others put together.

I keep up eight or ten shoats on my place, and feed them on what would be thrown away and injurious, and kill as we want, and when they get too large for table use, in the summer, turn them over for bacon.

I keep a boiler (and on one place two) on each place, put up on a proper furnace, holding from one to two hundred gallons. I have all the water from the kitchen, dairy, pantry, &c., saved and thrown into the boiler daily; also the refuse vegetables, &c., and it would do you good to see my saucy pigs.

I made, last year, manure enough in my pig pen to manure two acres of land, as well as land ought to be manured.

I now have three acres of corn planted, (the 3d and 13th of July) according to the instructions given in your July number, for forage. You ought to see it. The first planted is two and a half feet high, and the last planted is ten inches.

I have five acres of Ruta Baga Turnips up, and I am planting, to-day, five more. I will plant twenty on my places up here; and will, if I have seasons, make fat cattle, sheep and hogs, and make manure enough to pay for the work in making them fat, besides.

I have, in front of my house, an old field, called poor when I bought the place. I plowed fifteen acres of it, two years ago, with a large two horse plow, and subsoiled it with a subsoil plow with two horses, and planted the ground in Turnips; I made a fine crop. Last year the field (75 acres) was put in Oats. There were no weeds on account of drouth. In October the land was turned up with a two horse plow, and all the manure from the lot (on this place) hauled out on the field in the winter and spring on the poorest places. I told my manager if he would manure and manage the field so as to make it produce 40 bushels of corn per acre, I would give him \$30. To-day he called and told me I might select any ten acres in the field at one place, and if it did not average 30 bushels per acre he would give me \$30, if I would give him \$20 if it did. I have no doubt the management and manure, on that one field, will make from 600 to 800 bushels of corn this year more than it would have done in the usual way of planting and cultivating. I must stop, or my half sheet will be over full.

I think you ought to double your subscription list next year. Believe me, my dear sirs, your friend truly,

P. L. W.

Whitfield Co., Ga., July, 1855.

BOTS OR NO BOTS--AGAIN.

EDITORS SOUTHERN CULTIVATOR—Not long since, I lost a mule, in whom, when opened, only one bot and one worm about 8 inches in length, could be found, and yet the whole of the stomach was gone except a small part, say twice the size of a man's hand, next to the throat and that was a mere gauze-work, full of holes. I gave her several different kinds of medicine; but I have been informed by two physicians that the medicines I gave her could not have produced that effect. Sometimes she would act as though she had bots and again as though she had cholice; occasionally turning her upper lip up. My neighbors have lost mules and horses in the same manner.

Question—What is the disease? and what is the remedy for it?

T. C. C.

Midvale, Miss., 1855.

A CHAPTER ON LOCUSTS.

EDITORS SOUTHERN CULTIVATOR.—I noticed in your July number "L. W. P." essays to inform your readers "when and how" the Locust "originates." This is an interesting question, and one (as regards our Locust) that is now engaging the study of Naturalists—wiser and better heads than mine, and, I fear, than that of our friend also.

My attention was called to this insect this spring by my little girl (5 years old) who pointed out to me the holes in the ground, the bugs on the fence and the perfected insect fluttering about, just as described. She seems to have been as well posted up on the Locust question as your correspondent, and, I think, perhaps better; for she expressed no apprehensions whatever as to the safety of the coming crops from that source. On the contrary, from the manner in which she handled them, she evidently considered them a very harmless thing. Since this I have observed, to a limited extent, the habits of this insect, and noticed your request for information, but did not consider the facts in my possession of sufficient extent to venture an opinion—"when and how." But as the tree has already been hacked, perhaps a few more licks with the hatchet may leave so much the less for some pondrous axe which shall come after. I will then, in as short a space as may be, give you my observations. If they weigh anything, throw them in; if not, credit me with the intention.

The insect your correspondent terms Locust, is, in fact, no Locust at all, being deficient in the masticatory apparatus which is an essential characteristic of the true Locust. It evidently is a species of the genus *Cicada* and we will call it *Cicada Americana* until some competent authority disputes the right. The *Cicada Americana* may be found in four different stages of development. The egg—the worm—the bug, and the fly—(don't criticise my terms, I'm no naturalist). The eggs may be found now imbedded in the surface wood of small, tender twigs. There they remain until spring, when they hatch, forming a small white worm (2d stage). This worm, under my observation, does not prey upon vegetation of any kind to an appreciable extent. When about a half an inch in length, they may be seen suspended from the limb by a web which they are spinning, and by means of which they let themselves down to the ground and enter the earth. They then envelope themselves in a ball of earth mingled with slime, given off from their bodies, and lie dormant—how long deponent saith not. The next we learn of the *Cicada*, it perforates the ground, as described by "L. W. P.," and exhumes itself, in large numbers frequently, in the third, or bug stage, fully matured. It crawls (has no wings) up on trees, stumps, or fences and fastens its claws or feet firmly and permanently in the wood. In a few hours the bug splits open on the back and disengages the perfected insect in the fourth or fly stage. Male and female having peculiar distinguishing characteristics. Both are provided with a long tubular proboscis, similar in appearance to that of the common house fly, saving the enlargement at the point. This tube is flexed up under the body, between the legs, and so close to the body as to escape notice, unless on close inspection. The male only emits the singing sound, which all have observed. This comes from an exceedingly beautiful and intricate harmonican-like apparatus upon the back which vibrates for a length of time from the least quantity of air expired through it by the insect. This sound, although loud at first, becomes louder and still more deafening as the insect grows older. The female is armed behind with a long, firm, hard, needle shaped instrument with which it perforates the young, tender limbs, only, of the tree, splitting the bark and penetrating the wood in a slanting direction. Into this hole the egg is deposited and there

remains until the succeeding spring, when the same series of transformations again commence. The female *Cicada* may be seen boring these holes; she first splits the bark and then entering the point of her needle in the wood, gives it a slight rotary motion gradually pressing it downwards and backwards. When completed it has the same appearance as if done with an awl by hand.

How long a time is occupied in the completion of these metamorphoses and reproduction of the perfect *Cicada*, is not yet known. An impression generally obtains that it occupies some years; some say fourteen, and that these insects are never seen at intermediate periods. This, my observation contradicts. They may be seen in limited numbers any year. It is possible, perhaps probable, that the *Cicada* of this year may not return to us for seven or fourteen years to come, while that of six or thirteen years ago would return next year, and so on. It is also true that they appear some years in vastly larger numbers than others. Some years we have an abundant, overflowing wheat crop and others scarcely make seed. The fly comes out of the bug, a large, plump, fat fellow, perfectly swimming in grease. It gradually declines in weight until at death it is but a mere shell, exceedingly light. This decline in weight keeps pace in direct inverse ratio with the increasing sonorous noise of their song, in consequence of the gradually enlarged capacity of their air cavities. These facts strongly corroborate the inference which observation leads to, that the fly eats nothing, but is sustained from its own store of adipose matter gradually consumed or burned out, as the oil in the lamp. The flame flickers and is gone when the last drop of available oil is consumed. The duration of the *Cicada Americana* in the fly stage is not exceeding two weeks.

BARON CUVIER, in his "Animal Kingdom," speaking of the genus *Cicada*, tells us "the Greeks devoured the pupa (bug) which they called Tettigometrae, as well as the perfect insect (fly). Before coupling, the males were preferred, but afterwards the females were selected, being filled with eggs. I have recently conversed with a gentleman, an old inhabitant of this section of country, who informs me that the Cherokee Indians were accustomed to eat them and considered them, in the fly stage before depositing the egg, a very great delicacy. He has eaten them himself, and pronounces them first best, surpassed only by the hind leg of a frog, fried in batter. The Indians took them when first liberated from the bug stage and put them in a pan, frying them in their own fat, which is so abundant as to almost entirely cover the crisped insects.

It has grown into a proverb among our farmers that "the Locust year is always a good crop year." It proves so at least in the hog crop. When plenty in the woods they furnish a valuable aliment for this animal, not surpassed in importance, perhaps, by the acorn crop even, which all our farmers prize so highly. The fatty matters of the *Cicada* need but slight transformation in the stomach of the hog, until stored away in the form of nice, clean lard.

The *Cicada Americana*, by puncturing the elm in Eastern countries, causes the sap to exude, and concreted in the bark forms the saccharine purgative substance called Manna, an important article in the drug market.

The fears expressed by your correspondent for the safety of his corn and cotton are really quite laughable. I would say to him, whenever he has any apprehension of damage to his crops from the ravages of worms, bugs, flies or other insect, if he will, with a microscope or magnifying glass, examine the mouth, he can soon satisfy himself. From an insect provided only with sucking apparatus, like the common house fly, there is no danger, generally speaking, of injury to vegetation. But when you find a mouth filled with teeth, knives or saws, then you may look out. Such an examination redeems, forever, the character of

the *Cicada* from his suspicion. They hurt nobody but lone old Bachelors, who eat hearty suppers and spend wakeful nights, who have no patience with crying babies or other musical animals. The wound inflicted on the young shoots of the tree does it no perceptible injury. An impression prevails in a few counties in our State that the *Cicada* lays its egg in the fruit of the common blackberry. That the berries, when eaten, carry with them the egg to the stomach and there hatch, infesting the stomach and intestines with a virulent species of worm, highly destructive of health and even life. Hence, the use of blackberries is interdicted altogether during the "Locust year." I need scarcely say that I consider this all an old woman's whim. In the first place, there is no reason to believe the egg is deposited in the berry; on the contrary, there is abundant reason to disbelieve it. And supposing it is, and a child eats the berry. As well might we expect the hens egg eaten to-day to resist the action of that powerful agent, the gastric juice, and in its due time (three weeks) hatch and bring forth a veritable Shanghai in the child's belly, as to suppose that these little eggs lie in the child until spring and bring forth worms.

A rumor prevailed in our community this spring that many children had been stung by Locusts and become seriously ill, and that one had died in consequence. Nonsense! When will our people learn to reason a little on these things, in place of following, blindly, the *ipse dixit* of an old "Granny?"

I have some brief notes of observations on the habits of insects injurious to vegetation, which infest the kitchen garden, together with some suggestions in the way of remedy, when you get a little over the Locust question. I am afraid to hit you with both at once.

Respectfully, R. B.

Rome, Ga., July, 1855.

QUERY.—Hasn't money enough, in the way of time, paper and ink, been spent on the Bots' question to buy a microscope that would set it forever at rest?

CORN AND COB MEAL FOR HORSES.

ONE of the editor of the *Michigan Farmer* has been experimenting on corn and cob meal, as horse feed, for a couple of months, exclusively, and with the following results. After one month's feeding, febrile symptoms were occasionally observed in one of the horses, such as short and quick breathing, &c.

On stating the case to Dr. Dadd, the skillful veterinary surgeon, of Boston, it elicited the following valuable letter. The importance of occasional change of food which it recommends, is not sufficiently attended to by our farmers in feeding their stock:

"As regards your horse, I would (if he is no better) change the diet immediately. He is probably suffering from acute, or perhaps chronic indigestion, which is very apt to occur in animals when kept too long on one kind of diet.

"No facts in dietetics is better established than that of the impossibility of long sustaining health, or even life on one kind of diet. It fails to support nutrition. (See Liebig and Carpenter.) The animals experimented upon, after a certain length of time, seemed willing to endure starvation rather than live on one kind of diet. As regards the adult horse, however, he will exist for some time on highly nutritious articles, such as oats, barley, corn meal, &c., but they finally induce febrile diseases such as *laminitis* (inflammation of the foot,) rheumatism, founder, &c. They do not require so much of the flesh-making principle as the young and growing animal, which not only requires sufficient carbon in the form of food to renovate the tissues, but also enough for growth and development.

"The adult, however, requires a greater variety of food than the latter, to support the integrity of his organization, consequently, as you have fed your horse on corn and cob meal all winter, there may be a disproportion between the amount of carbon, (in the form of food,) and the oxygen respired, hence his digestion must be deranged, or carbon, in the form of fat, is deposited in the various tissues.

"A fat horse, of course you are aware, is not the one for fast work nor fatigue, and, the emaciated excepted, is more likely to become sick, from the least exciting cause.

"On the other hand, an excess of carbonaceous material deranging the stomach—it holding sympathetic relation with the brain—is apt to terminate in staggers, &c. It should be known to horsemen that an adult horse ought not to increase in weight from year to year; the food may be proportioned to work, any increase of flesh or fat, is a signal to dip a lighter hand into the meal bag; that is, if you want to keep disease and death at bay.

"It pays to fatten cattle, sheep and swine, because the result, is dollars and cents; but you may depend that it is losing a spec. to fatten horses; for among such I have the most practice, their disease being more difficult to control than when occurring in others, in fair working order.

"As regards corn and cob meal, I think it operates injuriously on a great many horses.

"In the first place they do not always masticate it properly, it being soft and easily insalivated, they are apt to bolt it, as the saying is; it then runs into fermentation, resulting in flatulent or spasmodic colic.

"In order to obviate the difficulty, the meal ought to be mixed with cut hay or straw, articles that must be masticated ere swallowed. Should the digestive organs be deranged, meal ferments very rapidly, inducing flatulency.

"I should not object to giving a horse a feed of corn and cob meal occasionally, mixing it with cut hay and a little salt. Salt is a good antiseptic—prevents fermentation—affords by the decomposition in the stomach, muriatic acid and soda; aids digestion and prevents the generation of worms.

"The best remedies for restoring the digestive functions are:

"Powdered Gentian, 1 oz. Powdered Ginger $\frac{1}{2}$ oz.
do. Salt, 2 oz. do. Charcoal, 1 oz."

"Mix, divide into 8 parts and give one with the food, night and morning."—*Pa. Farm Journal*.

DROUTH—DEEP FLOWING AND SURFACE CULTURE.

EDITORS SOUTHERN CULTIVATOR—In this region of country, the great enemy we have to contend with is drouth, and the true secret of cultivation is that mode best calculated to counteract its direful effects.

My neighbors knowing I have but little practical experience, confidently predict a failure, and call me a "book farmer," &c., and feeling conscious of the want of practical experience, I have some doubts of success, although my operations are founded upon true scientific principles.

Knowing you to be deeply versed in the science of Agriculture, I propose to submit my plan of cultivation to your consideration, and ask your opinion of its correctness.

"A dense body receives and radiates heat slower than a more porous one;" and moisture obeys precisely the same law.

"Water will rise, in a capillary tube of 1-100th of an inch in diameter, five and three tenths of an inch; in one of 1-1000th of an inch, fifty three inches, and so on, in inverse proportion."

These two facts are the basis of my theory. As a consequence, then, the deeper the land is broken and the more

thoroughly it is pulverized the greater the quantity, and the higher the moisture will rise, for this process increases the number and diminishes the size of the capillary tubes.

It is true that a porous body radiates heat and moisture faster than a more dense one; but the moisture evaporated by radiation is largely overbalanced by the increased capillary action, leaving altogether out of view the advantage gained by the earlier radiation of heat at night, thus facilitating the formation of dew upon the surface, which the porous land much more readily absorbs. This is the philosophy of surface culture during the prevalence of a drouth (if the land has been deeply and well broken up) by frequently stirring the surface, the crust formed by the sun and dew is destroyed, and the heat absorbed during the day is sooner radiated at night. It was a long time before I could reconcile this *surface culture* with capillary attraction; absorption and radiation of heat and moisture consequent upon *deep plowing*; it seemed to be antagonistic, but, properly considered, it is but part and parcel of the same thing, and perfectly in accordance with the laws governing them; for as you pulverize the surface of deep plowed land you lessen the size of the capillaries; thus inducing the moisture to rise higher, and, at the same time, you lessen the power of radiation, because the finely pulverized surface approaches density.

I commenced deep plowing last season. I broke up the land full six inches, and subsoiled about 40 acres six or seven inches deeper. I candidly confess that my expectations were not fully realized last season, but think I understand the reason, viz: The deep culture was not continued late enough—the commencement of the season was dry; after the 1st of May, excessively wet until about the middle of July, after which we had no rain for *eight weeks and one day*. The grass threatened at one time to take entire possession, and forced me to cultivate with a view to its destruction alone, and when the rains ceased and the land was *sufficiently dry to plow, deep* my team was too much exhausted to do so.

This season has been peculiarly adapted to test the efficacy of deep plowing, having been dry from the beginning, the ground has not been saturated since the plows started before the 1st of January, indeed we have not had a "a good season." The old fogies admit my crop to be the best in the neighborhood on similar land, both corn and cotton, but refuse to ascribe it to the true cause—*deep plowing*. The cotton on the subsoiled portion is fully 50 per cent. better than on similar deep plowed, but not subsoiled land. The cotton crop is now in a condition when farmers usually run over with sweeps, and lay by; but I intend doing what the "old fogies" say is the worst policy of all, and that is, to run at least three furrows with a bull-tongue as deep as possible, but not near enough to injure the roots, then sweep and lay it by, unless a heavy rain should form a crust on the surface before the plants shade the land. The cotton is beginning to mature its fruit and henceforth needs more moisture than at any time previously.

The arguments in favor of deep plowing are just as strong of a wet season—the rain water is more readily absorbed—permeates the land deeper, retains all its fertilizing properties and holds them as well as the moisture longer for the sustenance of the plant, which under the *scratching* system would run off and be lost, besides washing the soil with it. The roots of the plants would penetrate deeper—farther from the effects of the sun, and of an excessively wet season not be half so liable to be scalded or drowned.

I must apologize for the length of this letter. I had no idea of writing so much when I began. A reply, either through the columns of the *Cultivator* or privately, will confer a favor on

Yours respectfully,

Collinsburg, La., June, 1855.

REMARKS.—The theory of our correspondent is, in all

essential particulars, the same that we have held and advocated for many years, and will be found in *practice*, fully to realize his expectations. We should be delighted to know that all our readers understood and practiced it. We hold, also, that both Corn and Cotton should be *surface-worked* repeatedly by harrows, cultivators or horse-hoes, until the blades or branches interlock, so that the further passage of horses or mules is impossible.—Eds.

EGYPTIAN OATS.

A CORRESPONDENT in the January number of the *American Cotton Planter*, enquired for information "on the culture and raising of Egyptian Oats," to whom Mr. THOMAS AFFLECK, of Mississippi, replies as follows:

"This oat is a large, plump, white grain, differing from any of some thirty odd varieties of oats I procured from Scotland one season and grew here, and excelling them all in thrifty growth, and resistance of frost—what say you anti-habitationists to that fact? and yield of plump, well filled grains. It was originally introduced, it is positively asserted, from Egypt to this country, many years ago, perhaps forty or more. I have had them weigh, repeatedly, over 42 lbs. per streaked bushel. They require good land, of course, to yield well; and land in which lime is present. Cotton seed, however, will produce them on almost any soil.

The Egyptian Oat should be sown not later than 1st September, if possible, or from middle of August to first of October. They may be grazed during winter; but I am doubtful of the good effect on young stock, unless the extent of oats to be grazed is large in proportion to the quantity of stock. If allowed to become fully ripe before being cut, enough drop to seed the ground again; or if they are fed down by stock. In either case they should be plowed in shallow, and peas sown broadcast immediately after and hoed in well. In fact, both operations should go on at once, as at that season we often lack rain, and the ground, when newly turned up, would have moisture enough to sprout the pea. By the time the peas are eaten down, there will be a fine stand of oats, to which the pea vine will serve as a fine manure *a la Gurney*. I have seen this process carried on through three years in the same field—self-sowed oats again followed by self-sowed Tory peas, and so on. The soil was greatly improved, so that the crop of corn which followed was a superb one. The peas and oats were eaten off by stock, however, each time. The first sowing of peas may be drilled and tanded, if desired. Plaster or gypsum—(sulphate of lime) is a specific manure for the peas, as for all leguminous plants, and will force a noble crop upon the poorest land.

HYDROPHOBIA—HOW TO USE POKE ROOT—FEEDING SHUCKS, &c.

EDITORS SOUTHERN CULTIVATOR—The mode of administering the Poke Root is to make a strong decoction, and give a wine glass full when the patient feels the paroxysm coming on, and it will *relax the spasm immediately*.

My mode of feeding the shuck to stock is simply to wet with cold water and suffer it to remain from six to twenty-four hours, and the corn should be put in soak in molasses or whisky barrels for twenty-four hours before using, and any man using in this way that cannot keep a fat team should quit planting. I save all my shucks, and, for fear of injury, pack in bales with strips of timber at bottom and top, and not a shuck do I throw away. They are far preferable to fodder for mules.

Respectfully,

JAS. L. GORRE.

Cummins, Ark., July, 1855.

A PLOW FOR DEEP TILLAGE—TO "J. F. M." AND OTHERS.

EDITORS SOUTHERN CULTIVATOR—I observed in the July number of your journal a communication from "J. F. M." dated at Port Gibson, Miss., making inquiries for "some good Plow with which we can follow our ground to the depth of some 8 or 10 inches." For his information as well as any others who might be influenced by my judgment, I will state that I believe I can recommend one which will fully answer their wishes. This plow, I believe, I introduced into this section of the country, and through my recommendation several hundred have been sold, and all whom I have heard express their opinion speak very favorably of them. They are manufactured by Messrs. GARRETT & COTTEMAN, Cincinnati, Ohio, and numbered from 1 to 8. The No. 1 is for one horse and No. 2 for two horses to cultivate with after breaking up. I use No. 7 to break up my land and it turns a furrow at least 12 inches deep and 10 or 12 inches wide. To do this in a proper manner, I use three strong mules abreast. They are attached to the plow by means of a treble-tree, which is ironed at each end also about a third of the way from one end, and consequently two-thirds from the other. This last is attached to the clevis. A double-tree having 2 single-trees is attached to the short end and a single-tree to the long end. These must be constructed in good proportion, so as to allow the mules to travel with ease, and the ablest and most experienced men to do the plowing. These plows measure, from the bottom of the share to the bottom of the beam, 17 inches, so that, with the team and hand which I have described, a furrow of from 12 to 13 inches deep can be turned without any difficulty. Care, however, must be taken that the furrow is turned full and complete, that a track may be made for the succeeding furrow.

Land, however, that has a compact or clayey subsoil, and has never been plowed deep, it probably would be difficult to plow 12 inches deep at first. In that case it probably would be best to get down gradually to the required depth. I do my breaking up usually immediately after a hard rain when the subsoil is saturated with water, but of course the land not too wet to do good plowing. I use no plows but those having "steel moulds," which I consider a very important desideratum. When I wish to break up solid, it is done in "Lands" of widths which are not inconvenient, say 12 or 15 yards. When I wish to plow by rows, two or three furrows are turned in the water furrow with a No. 2 plow, then the ridge plowed out with a No. 7.

Although the share of this plow can be repaired as easy as any, it is important, to keep them in good order, that none but an experienced blacksmith be allowed to work on them, that their original form may be maintained. Then with proper care, they will do good service four or five years.

I formerly used subsoil plows, but have abandoned them, preferring the foregoing method for different reasons in breaking my soil.

Any further information on this subject required, I will readily give.

I am your friend and obedient servant,
W. WILCOX, M.D.

West Feliciana, La., July, 1855.

TREATMENT OF PRAIRIE LAND, OR PLOWING IN DRY WEATHER.

EDITORS SOUTHERN CULTIVATOR—I have written to you before about theoretical farming. What I shall say here will be exclusively on Prairie land. I have been taught from my earliest recollection to the present time, that plowing land in dry weather would make the moisture

rise; which, I believe, it will, on land that has much sand in it, but my experience has taught me to believe it has the contrary effect on Prairie land. The inculcation of the former theory has caused many Prairie farmers to injure their crops by plowing during the protracted drouth, continued here from the 5th of April until the 28th of May. Early inculcations are hard to eradicate; consequently many persons go against their better judgment.

All experienced Prairie farmers know that Prairie land dries as deep as it is stirred in dry weather; yet many of them will plow to make the moisture rise. This shows the importance of studying the constituents or nature of the soil. The precedent necessitates a full and elaborate description of the nature of Prairie land; but let it suffice for the present to say that these lands, when wet, can be waxed like wheaten dough, and if dried in that condition apparently they will become as hard as a brick; if wet after they become thoroughly dried, they will slack and become like ashes. The surface of these lands go through those changes as often as they are trod or worked too wet, and dried in that condition. When wet they will bog as deep as they have been stirred. After these lands become dry it takes a good deal of rain to settle the ground. If a sufficiency of rain has not fallen to settle the beds they will neither stand dry nor wet weather. Corn or cotton planted on such beds in dry weather will not come up until it rains; if it does it will suffer, the ground having but little capacity for containing moisture in that condition—such beds in wet weather become saturated with water, the ground then being in a slacking condition, I have no better comparison for it than "mush." Corn or cotton on such beds will turn yellow. As the subsoil absorbs but little of the water that falls, it has to evaporate or drain through the surface until it reaches the low places or ditches; consequently it is very necessary to have the rows in a draining position. The capacity these lands have for containing moisture consists in the fineness of the surface. The ground will wax very near the top of a fine pulverized surface, during the most protracted drouths of these regions. In demonstration of this I will delineate my management of the present crop. The winter being very favorable, I got all of my land bedded in due season for planting—planted in time to get a tolerable good stand both corn and cotton; early in April, I ran one furrow in the middle of every row, both of corn and cotton, then put up my plows, and continued going over both corn and cotton with the hoes. Every person that saw my crop said it stood the drouth as well or better than those that plowed their crop. It is evident that it stood the rain better.

Yours, &c., A. J. COOK.

Lowndes County, Miss., July, 1855.

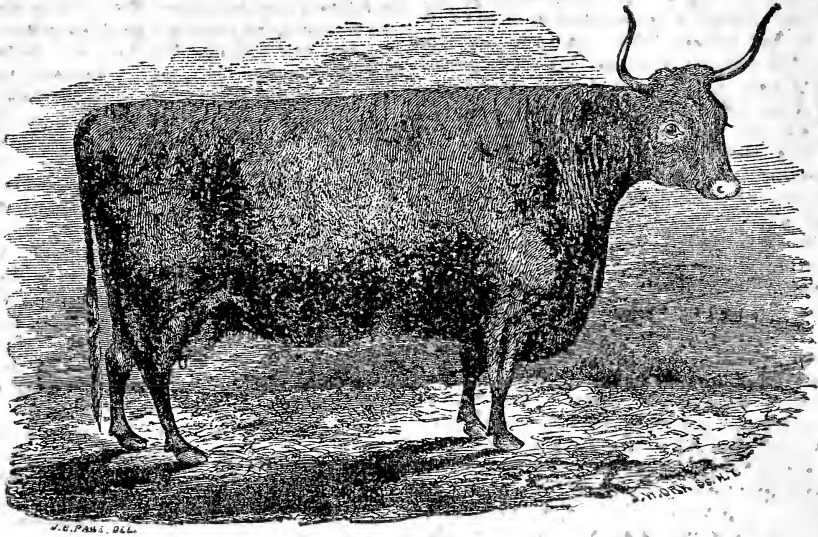
SCOURS IN COLTS.

EDITORS SOUTHERN CULTIVATOR—I see a recipe in your July number from a Jasper friend, for the cure of scours in colts. I think my friend is entirely off the track; for to kill a colt I think nothing more necessary than to give it such a dose; and I only appeal to the reasoning of every common mind to prove it. And had my friend thought for a moment he would have known that all that was necessary was to take the mare off of verdure and feed her on provender; and, if the colt would lick meal, give it a handful of parched meal, instead of physicng the poor creature to death, like two-thirds of mankind do their horses, when they show symptoms of cholera, or some other pain.

It is a lamentable fact that when a horse takes sick, if the disease does not kill him, his owner will come as near it as possible, by giving him every remedy that he ever heard of being given for such symptoms.

Yours truly, G. S. Q.

Readyville, July, 1855.



NORTH DEVON COW,
"BIRTHDAY," (38)*, 10 YEARS OLD.

WINNER of the 1st prize at the New York State Show in 1853 and 1854. 1st prize at the Devon Agricultural Show at Exeter in 1848, and 1st prize at the Barnstaple and North Devon Cattle Show in 1848, as one of a dairy of cows. She was sired by "Proctor" (109), dam, "Taunton" (440), and is the property of L. G. MORRIS, Esq., of Mount Fordham, N. Y., by whom she was selected and imported.

Our friend, Mr. R. PETERS, of Atlanta, who is well known as a breeder and importer of Devons, was so much pleased with the above Cow, as a sample of the milking Devons of the "PATTERSON" order, that he has obtained from England, at great cost, through J. TANNER DAVY, Esq., Editor of "Devon Herd Book," two very superior cows, "Graceful" (762), a grand-daughter of "Birthday," and "Geety" (196), a daughter of "Birthday."

These animals are, in all respects, very fine; and their blood must add greatly to the milking qualities of the very remarkable herd already in the possession of Mr. PETERS.

* See DAVY'S "Devon Herd Book," page 33.

A HOME.

If we were to tell a number of our friends that they don't know what a "home" is, they would grow somewhat indignant—perhaps, use hard words. And yet it may be remarked that the number of persons who know what a genuine home is, by experience, is surprisingly few. One man in good circumstances will tell us that he has a fine house of his own, in which every comfort and convenience is provided. He has a wife and children there also, and they give life to the place. Very true. But does he prefer that home, thus furnished and thus enlightened to every place in the world? Does he sigh when the hour for leaving comes, and smile when he is permitted to return? Does he love to sit by the cheerful house-fire and fondle the children, entering into all their little disputes with a curious interest? Does he take particular note of the birds in the cage, and the cat near the fire? If not, he has no home, in the dearest sense of that dearest of words. If his mind is altogether absorbed in the dusty ways of business—if he hurries from the house in the morning, and is loth to return at night—if while he is at home, he continues to think of the journal and ledger, and repulses the advances of the prattling of children, he has no home; he only has a place where he lodges and takes his meals.

Ah! happy is he who knows and appreciates the full bliss of home; whose heart is warmed and humanized by its cheerful influence, and who feels how superior in pur-

ity of pleasure are all its enjoyments to the turmoil delights of out-door life. Thrice happy is such a man. He has discovered the only Paradise this world can now afford. It is only such a man who can have a deep and sincere pity for the unfortunate creatures who are homeless. He regards them as beings cut off from the best influences of the earth, and exposed to the action of all the darker waves of life. He feels keenly for him who has no fire-side—no dear ones to welcome him with smiles, and prattle over the little history of the day—no tongue to soothe when heavy cares have troubled the mind and rendered the heart sore; and the sympathy of such a man is not slow to overflow in acts of benevolence. A good home is the source of the fountain of charity in the heart.

Our advice to those who have no homes, such as we have described above, is, to get them as soon as possible. They can never be contented and substantial citizens, nor thoroughly happy men, until they follow this counsel. Get homes! Fill them with the objects of love and endearment, and seek there for the pure delights which the world besides cannot afford.—*Exchange.*

TO MAKE PASTE THAT WILL KEEP FOR A YEAR.—Dissolve slowly in water two square inches of glue and an equal quantity of alum. Mix and boil with flour, as usual, and then, when nearly cold, stir in two teaspoonfuls of oil of cloves or lavender—the whole to make a pint of paste. Keep in a well covered vessel.

A REPLY TO "HOLLOW HORN," AGAIN.

EDITORS SOUTHERN CULTIVATOR—I see in the July number of the *Cultivator* "A subscriber" has come out again on the "Hollow Horn;" he is hard down with a "sharp stick" pointing at me. He says, however, "and as my object was to draw a discussion on the subject for my own benefit and the benefit of others, I will attempt a reply, and if it is taken in the same spirit in which I write it, I am sure it will do no harm if no good." I must say to him, I am "thar," too; but when malice, anger and hard words are used in a discussion, on any subject, I am not "thar." He says if I think it is the "Hollow Belly," of course I have the right to think as I please; but as for himself he cannot think as he pleases every time; this is a little strange somehow, is it not?

In reference to what I said about one of my neighbor's cows he says "Now, if the horn was not hollow I should like to know how he poured salt and water in it. Let him bore into a horn that is not diseased and see if he can pour water into it." True, this cow's horns was not hollow, but he poured salt and water in the hole he made with the gimlet. Just as plain as "A Subscriber" would put a clevis pin in the hole he bored at the end of his plow beam. He says: "I pronounce that one case at least of a fat cow having the hollow horn from his own testimony." I see no testimony in what I have said to prove that a fat ox or cow will take the hollow horn, but altogether to the reverse, notwithstanding he is trying to make me mean what I never said. And now, in conclusion, I will use his words, "so I will drop brother 'A Subscriber,' for fear he may think I am quarrelling with him, which is not the case—all for information." W. R. J.

July, 1855.

TO COTTON PLANTERS.

FRIENDS AND FELLOW CITIZENS—As Fourth of July and office seeking orators say, "Hear me for our cause."

The crop of 1852 was 3,262,682 bales; that of 1853 was 2,930,027 bales, short of the preceding, 332,655 bales.

Up to June 25th (the latest date received) the crop of 1852 received was 3,152,498. The crop of 1853, received to date, was 2,761,044 bales. The crop received to date of 1854 is 2,591,687. Suppose even the amount received between this and September 1st, the close of the cotton year, with our water courses all lower than usual at this season, should equal the receipt of last year, within the same period, say 170,953 bales, which, added to present receipts, give our 1854 crop—2,762,670 bales; or a crop less than 1852 of 389,726 bales—less than the 1853 crop of 167,357 bales, which is a deficit, if the three last crops had been equal, of stock on hand of 557,085 bales. A matter worth your inquiry.

The question is, What can we do to better our condition—to enhance the value of the staple and injure no man? We know that the price at which cotton has ranged the two past years (5 to 9 cents) will not pay. No one should quote the extreme highest rates, because they are fancy prices, and proceed from extrinsic circumstances. We quote the price that some two-thirds of the crop sell at, and would, if you send your merchants, the two and a half or three million of bales—all strictly FAIR. Suppose we do add to our stock in trade every year, if it does not prove that we can afford to make cotton at 6 to 7 cents. A man with a well ordered plantation would increase his capital even should he only feed and clothe, though only showing an increase from his operations, and he might then get poorer; for his work stock and land might wear and tear more than the increase. So, then, what shall we do? Permit us to advise. Even at this date provide feed; corn now sown, will make feed for horses, mules and

cows. Pick cotton more careful; see your gins do not nap or cut. All cotton picked in good weather, before frost, dry carefully and pack away close for 10 or 20 days before ginning—except for seed—then gin out, pack and send to market, say an eighth of the crop per month. The crop that is leafy, after drying well, pack it away and leave it there 3 to 6 months, noticing from time to time, so if heating, that all may be colored alike. This mode, it is believed, will give time for the leaf to decay so much, that when ginned, the most of it will pass off as dust, and the weight will be better preserved, color and softness and strength restored. In connection, those who are not compelled to draw bills to settle up and pay off, should not draw a dollar on crops.

Our cotton must be bought. This war story is all stuff. War or no war, people must be clothed; manufacturers must work to pay interest; operatives must be fed.

England can better pay £100,000,000; or kill off a few hundred thousand a year in defending the Crescent, in bear baiting, than lose our cotton crop. And every bale we make must be worked up. Reports to the English Parliament show, beyond all cant, that cotton pays all expenses and a profit of 50 to 100 per cent. Yet we barely live.

The next thing is, let every man be certain to raise corn to sell. This will insure meat in every county in the South, for where corn is to spare there hogs delight to assemble. Plenty of bread, seems to ensure fat and healthy and cheap stock. If any State in the cotton region will make corn in such abundance as not to sell for five years, the result will be, that the profit will be seen in a saving almost equal to a cotton crop—net proceeds of '54 or '55—from hogs, mules, horses and cattle, and the health and increase of negroes. It is so with individuals and why not of communities? Let any man notice the individual who always has corn to spare, using liberally at home, and he will see the man who increases most rapidly, taking land, negroes, stock and all, into account.

Preserve health of negroes, by good houses, good clothing, good food and fair work hours, teaching them to observe all duties to God and man, and our word for it, we will hear little more of low prices and fear of want.

Yours with all due respect,

A CAROLINIAN, WEST.

HOMMONY is an article that no family desirous of practicing economy can do without. It costs only half the price per pound of flour and contains no moisture, while the best of flour holds from twelve to sixteen lbs. of water in a barrel. Cracked wheat is excellent for sedentary persons. That and Graham flour should be used in preference, at the same price per pound, to white flour, because it is more healthy and nutritious. One hundred pounds of Graham flour is worth as much in a family as one hundred and thirty-three pounds of superfine white flour. Corn meal costs less than half the price of flour. It is worth twice as much. It is not so economical in summer, because it takes so much fire to cook it. The first great error in corn meal is in grinding it too much, and the next in not cooking it enough. Corn meal mush should boil two hours; it is better if boiled four, and not fit to eat if boiled less than one hour.

SYRUP vs. BUTTER.—The *Portsmouth Journal* says:—A pound of butter now costs from 30 to 40 cents—and a gallon of excellent sugar house syrup can be bought for 40 cents. That the latter is the most economical all will allow—that it is the most healthy for family use, to those who have a Yankee taste, none will dispute. Many prefer it without regard to the economy. There is nearly as much nutriment in a pound of syrup as in a pound of butter—one, however, costs about twelve times as much as the other.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 9.....SEPTEMBER, 1855.

ANSWERS TO INQUIRIES, &C.

GRAPE CULTURE.—Ichabod H., P. M.—Try the Scuppernon, the Warrenton, the Catawba and the Isabella. Prune the first in the fall, soon after gathering the grapes; the others may be pruned any time from the fall of the leaf until January.

LUCERNE.—G. H. F.—See article on this very valuable grass in present number. The Lucerne is perennial. We might send you a small quantity per mail—the postage, prepaid, will be 6 cents per ounce—not prepaid, 10 cents.

AGRICULTURAL PAPERS, SOUTH.—T. E. M.—Your inquiries were answered per mail.

FRUIT PRESERVING CANS.—W. H. K.—The agents, D. B. PLUMB & Co., forwarded you a gross of these cans—we, also, advised you of the shipment, per mail.

LEVELING INSTRUMENT.—Rev. W. J.—Your drawing and description will be very acceptable to our readers. The missing number has been sent per mail.

GUENON ON MILCH COWS.—R. H. M.—The paper you desired, with cuts, was forwarded per mail.

TREES, SHRUBS, &C., FOR TEXAS.—A. H. P.—These articles can be shipped you safely *via* Montgomery and New Orleans to Port Lavaca.

TEXAS NATIVE GRAPES.—J. S. D.—Your letter and the seed was received, with many thanks. We wrote you, in reply, but have never received an answer. Did you get our letter?

MILCH COWS.—S. S.—Address R. PETERS, Atlanta, Ga., or Col. WADE HAMPTON, Columbia, S. C.

ICE HOUSES.—J. R. F.—See our August number, page 241.

BLUE STONE SOAK FOR WHEAT.—W. S.—Use one ounce or an ounce and a quarters of Blue Stone dissolved in water, to each bushel of seed, carefully drying the latter, afterwards, before sowing.

ANALYSIS OF SOIL, MARL, &C.—J. A. J.—Direct your samples of Marl to the senior editor, Dr. DANIEL LEE, Athens, Ga. A package containing one or two pounds will be sufficient. Send per express, writing Dr. LEE, per mail, at the same time.

BUCKWHEAT AND SAINFOIN.—"A SUBSCRIBER," D. C. T.—We know very little of the culture of Buckwheat in the South; at the North, it is sown in June or July, at the rate of from 2 to 6 pecks per acre. The yield is variable and uncertain. It should be harvested as soon as the early heads begin to ripen—if left till fully ripe, much of it scatters and is lost. The grain is ground into flour, and used mainly for the well-known griddle cakes. SAIN-

FOIN (*hedysarum onobrychis*) is a native of Europe. It has never been much cultivated in this country. It is best adapted to strong, calcareous land, upon which it often yields large crops of good fodder. It is worth trying here, by way of experiment.

SOUTHERN CULTIVATOR FOR 1854.—A. C., M.D.—The numbers you speak of were never received. We will send you a bound volume of 1854, prepaying the postage, at \$1 80.

"FERTILIZERS" VS. BARN YARD MANURE.—M. W.—Have you collected all the leaf-mould, swamp muck, ashes, stable manure and yard scrapings of your plantation, and composted them in your stable lot, with animal urine, chamber slops, soap suds, &c., &c.? If you have exhausted all these, and if you live contiguous to a rail road and a good market, you may invest some of your surplus funds in guano, superphosphate, poudrette, bone dust, &c., &c., with fair hopes of a profitable return—but not otherwise.

SHINGLE MACHINES.—D. R. W.—We do not know of a better one than *Stoddard's*. The general agent for this State is THOS. P. STOVALL, of this city, who can give you all desirable information.

CLOVER.—R. S.—See Col. CROOM'S Essay in our August number. We cannot recognize the heads you sent us, as belonging to any variety of Clover known to us.

MARES—RESCUE GRASS—DEAN COTTON—OATS, &C.—A. D. B.—We can give no opinion regarding the mare you speak of, as we do not clearly understand the meaning of the term, "grill-flirted," as applied to her. See back numbers for various articles on the Rescue and Musquit Grasses. The "Dean Cotton" is highly spoken of in Texas and the Southwest. It has not been introduced here, yet, to any extent. We consider the *Egyptian Oats* our best winter variety. "*Broomsedge*" is excellent authority for the value of the implements referred to. Would have answered your inquiries per mail, but we really cannot find time to reply to one-tenth of the letters we receive in that mode.

WILD ONIONS.—Can any of our readers tell us how to extirpate them? An old friend and subscriber in Hancock Co., Ga., wishes to know.

CORN SILKS OF DIFFERENT COLORS.—J. M. H., a subscriber, says:


"A lady asked me a question the other day, which, as I was unable to answer, I will ask you. Why is it that a field of corn, all of the same kind, has red and white silks? It is something I had never thought of before, and, as I am a little curious to know myself, would like to see an answer in the *Cultivator*."

It is more than probable that there is some mixture in such corn. If perfectly pure, the cobs and silks will, we think, generally be found of an identical color throughout. What say our experienced corn planters?

GRASS SEED.—J. B. C.—We can tell nothing of the variety of your grass from the sample of seed sent. Where does it grow? Is it annual or perennial? What is the character of its stalk and leaf? Can you send us a dried sample of the entire plant?

GRAFTING VS. BUDDING.—R.—We prefer root-grafting in the winter, for the Apple, the Pear, the Peach, the Plum, in short, everything but the Cherry. Splice-grafting is far less tedious than budding, much more certain, produces a finer tree, and it seems to us, possesses every advantage. It can be done within doors, by the fireside, of stormy days or evenings, with great expedition, after a little practice. At the proper season, we will give the *modus operandi*, so that the least experienced tyro can succeed.

"RESCUE GRASS."—S. O., writes us "Your paper for 1854, cost me \$6—\$5 of which I paid for B. V. IYERSON'S

celebrated 'Rescue Grass.' I followed his directions, but could never get it over four inches high, on land that has, this year, produced 40 to 50 bushels of corn. Worse than humbug."  Now, we cannot allow the cost of the Rescue to be added to that of the *Cultivator*, for the simple reason that we never endorsed the merits of that grass or recommended it to our readers. It is true, we published Col. IVERSON'S statement respecting it, leaving every one to form his own opinion of it, and those who chose, to test it. That was all. If our friend was disappointed in it, we are sorry; but he cannot reasonably hold us responsible. Many have spoken in very high praise of the "Rescue"—we have, in our drawer, a number of favorable letters addressed to the vender of the seed and to ourselves, which we defer for the present.—Another year will test the matter satisfactorily. We are not aware that Mr. P. has, in any publication, ever spoken *against* the suffolk breed of swine, though possibly he may have done so.

TURNING AND SUBSOIL PLOWS.—J. A. E.—The Peacock plows may be ordered from the "Nashville Manufacturing Company," or from their agents, Messrs. CARMICHAEL & BEAN, of this city. The same Company can also furnish you a very handy and efficient Subsoil Plow. "Foreman's Patent Plow" is well spoken of by many cotton planters. Prof. J. H. FITTEN, of this city, owns the right for a large district. R. L. ALLEN, of New York, furnishes a great variety of plantation plows, on reasonable terms. Will our readers, generally, throughout the Cotton Planting States, give us briefly their views and practical knowledge of turning and subsoil plows?

KNOX'S HORSE HOE.—F. M. F.—This implement is drawn by one horse or mule. It cuts up all weeds cleanly and perfectly, leaving them on the surface to perish. It is 20 or 24 inches wide. It is made by RUGGLES, NOURSE, MASON & Co., Boston, Mass. For drill or row culture, it surpasses in economy and efficiency any implement we have ever seen.

EGYPTIAN MILLET.—W. J. B.—Not having any of the seed, we enclosed your note and the postage stamps to Mr. STRONG, and hope he will comply with your request.

BARLEY.—A. C.—This grain requires a very rich soil. It may be sown from October to December, at the rate of 4 or 5 pecks per acre, on strong land, deeply plowed and well pulverized with the harrow. It can be cut green and fed to your stock in spring, or if allowed to ripen, the grain may be either soaked or ground. Either way, it is equal if not superior to corn for horses or mules. We can procure you a small quantity of seed, to begin with. Your letter on "Rescue Grass" will appear in our next.

STRAWBERRY PLANTS.—R. G. H.—See article in our last (page 248) and advertisement in present number. We can furnish the sorts you desire, in October.

INSECTS, &c.—*Quaro.*—Your letter will appear in our next.

STUMP PULLING MACHINES.—In answer to the inquiry of one of our subscribers, in a former number, we would state that W. W. WILLIS, of Orange, Massachusetts, advertises an *Improved Stump Extractor*, that is said to be very effectual. Price, from \$125 to \$150; but it can be made cheaper from a model by those who have a blacksmith and carpenter of their own. Address W. W. WILLIS, Orange, Franklin Co., Mass.

JAPAN LILY.—D. B. D.—This Lily is propagated by offsets from the main root or bulb, and seed. Address J. VAN BUREN, Esq., Clarksville, Ga., or HOVEY & Co., Boston, Mass.

FARM BUILDINGS, HORSE-POWERS, &c.—G. H.—For various plans of Barns, Stables, &c., see ALLEN'S Rural Architecture, also DOWNING'S Country Houses, &c. &c. We have no suitable illustrations, or we would gladly

comply with your request. The venders of the "*Little Giant*," furnish the necessary horse-power, with the machine. For the Thresher, &c., order an endless chain Horse-Power, through your nearest hardware merchant.


MICHIGAN PLOW.—W. D. G.—This plow is too heavy for ordinary bedding. It takes two stout mules to pull it. It is particularly adapted to grass or sward land, and very efficient for turning under trash, weeds, &c.

BOOKS, PAMPHLETS, &c., RECEIVED AT THIS OFFICE.

"HINTS for those about to engage in getting Turpentine," from JOHN M. POTTER, Esq. "Prospectus and Regulations of the Boston Veterinary Institute," from Dr. Geo. H. DADD. "The Knickerbocker." "Putnam's Monthly." "The Horticulturist," from the new publisher, ROBERT PEARSALL SMITH, Philadelphia, Pa. "An Analysis giving the comparison of the Mineral ingredients of Indian Corn, and Wool of Long Staple Black-Seed Cotton, with those of the Leaves of the Common Yellow or Pitch Pine and Red Oak. From St. John's, Berkley, neighborhood of the Santee Canal, (S. C.) Made for the Black Oak Agricultural Society." By Prof. C. U. SHEPHARD. "Journal of the U. S. Agricultural Society, for 1855," from W. S. KING, Esq., Secretary. "On the Sewage of London," from Jos. HARRIS, Esq., Associate editor of "Country Gentleman." "Address delivered at the State Fair of the Eastern Division of Tennessee, at Knoxville." By F. S. HEISKELL, President of the Knox County Agricultural Society. "The Constitution, Officers, and Premium List of the Onondaga (N. Y.) Agricultural Society, for 1855," H. D. DIDAMA, Esq., Secretary. "Breeding Cattle for Fattening." "The Dairy Interest of the State." "The Great Drought of 1854," and "Rain, Evaporation and Filtration," from B. P. JOHNSON, Esq., Secretary of New York State Agricultural Society. "List of premiums offered at the Third Annual Fair of the Virginia State Agricultural Society." "Premium List of the Third Annual Fair of the State Agricultural Society of North Carolina." "Household Words," for July. "The Rabbit Fancier." By C. N. BEMENT; from C. M. SEXTON & Co., New York.

TO CORRESPONDENTS.—Our present issue contains an unusual number of original communications, all of which will be found of great practical interest to our readers. We are not a little proud of our unrivalled crops of contributors, and grateful for their continued favors. The following are on file, and will be attended to hereafter,—J. S. D.—JEAKINS—B. B.—HARRY CAMP—L.—A. C.—*Quaro*—C. P. B. MARTIN.—A Subscriber—Junior—Zelotes H. MASON, M.D.—A. D.—A. C. A., &c., &c.

NOAH WARLICK'S IMPROVED PATENT PLOW.—We are indebted to Messrs. MUSE, WILLIAMS & Co., of La Fayette, Ala., for one of these Plows, with a *subsoil* point. We intend giving it a fair trial, and will report upon it hereafter.

 MANY articles prepared for present number are unavoidable postponed until our next; in which also may be expected a Report of the Fair at Atlanta, &c., &c.

SOUTHERN AGRICULTURAL SOCIETIES.

GEORGIA.—The Tenth Annual Fair of the "Southern Central Agricultural Society," will be held in ATLANTA during the week commencing on the 10th of September. We are informed that the preparations of the Society and the citizens of Atlanta are progressing on a scale that promises a most interesting exhibition, and the comfortable entertainment of the masses in attendance. ATLANTA is a central point, accessible for everybody; and now when the prospects of Agriculturists are so bright and cheering, all should relax for a brief season, after the summer's toil, and come to the Fair, determined to make it a grand rural jubilee and holiday.

ALABAMA.—The farmers, planters, mechanics, indeed all the people of our spirited sister State, (including the ladies—"God bless them,") are earnestly engaged in preparing for the first Fair of their Society, to be held in Montgomery, from the 23d to the 26th of October. "*Here we Rest*," (the English translation of the beautiful Indian name, *Alabama*,) no longer applies to the Agriculturists of that State, who by recent manifestations of well-directed energy have proven themselves to be decidedly progressive, in the best sense of the word.

TENNESSEE.—The Fair of the Eastern Division of Tennessee will open at Loudon on the 23d day of October. Railroad facilities are doing wonders for this fertile and beautiful region; and we hope to see its agricultural improvement keep pace with the locomotive. The Fair of the Middle and Western Division will be held in Nashville, from the 1st to the 6th of October.

SOUTH CAROLINA.—A large and highly respectable body of Agriculturists assembled in Convention at Columbia on the 8th of August, and remained in session two days. A regular report was made, suitable resolutions adopted, a State Agricultural Society formed, with Constitution, &c. Much interest was felt and manifested in the cause, and from the character of the gentleman engaged in the work, we augur the most favorable results. The Society meets again on the Second Tuesday in November.

NORTH CAROLINA.—The long slumber of the Rip Van Winkle State is over, and she is now thoroughly awake to the importance of improving both the soil of her territory, and the minds of her people. The Fair at Raleigh, last year was a decided triumph; and the forthcoming Fair promises to equal or surpass it in interest. It is also to be held in Raleigh from the 16th to the 19th of October.

VIRGINIA, with her powerful and generous State Society, nobly leads the van, and bids fair to revolutionize the entire system of soil wasting in the glorious "Old Dominion." We rejoice at the liberality and spirit that has thus far characterized this Society. It cannot fail of success. The Fair, for the present year, will be held in Richmond from the 30th October to 2d of November.

FLORIDA, LOUISIANA, MISSISSIPPI AND TEXAS, are (as the politicians say) "yet to be heard from;" and we hope they will all give rousing "majorities" for agricultural improvement.

COTTON PLANTERS' CONVENTION.

IN accordance with a resolution of the last "Southern Commercial Convention," a Convention of Cotton Planters assembled at Cooper's Well, Mississippi, on the 4th of July to hear the report of a select committee which had been charged with the business of considering the expediency and practicability of establishing a direct system of trade between the Southern States and Europe. The convention was in session two days, but we are not aware that any measure of particular importance was adopted. The Hon. J. J. McRAE, the Governor of the State, presided. At the opening of the convention, Mr. C. G. BAYLOR, the projector of the scheme, and who recently visited Europe on behalf the select committee to make arrangements for testing its feasibility, explained at some length his plan of operations. He proposes to establish in Germany the principal cotton depot or factorage, with a branch in New Orleans, possessing a capital of several million dollars, safely deposited, so that the planters should have ample assurances of its solvency and ability in every emergency to insure them against losses. After some discussion of this plan, and of various propositions urging Southern people not to purchase goods of Massachusetts manufacturers, and Southern lawyers not to aid in the collection of debts due to citizens of that State, a committee was appointed to investigate the scheme for direct trade, and the convention adjourned, to meet at Jackson in January next. The commercial portion of the newspaper press does not speak encouragingly of the leading object of this convention, it being deemed almost impossible to change the channels of a great commerce.

DOMESTIC ECONOMY.

Those who study and improve the every-day operations of civilized life are at once the most practical and useful of all reformers. Regarded as a science, Domestic Economy has the highest claims to the consideration of all thoughtful persons, and presents a boundless field of research, and numberless defects which demand either a cure or prevention. Social and household maladies come not directly under the head of medical, agricultural, or theological studies, and are apparently more neglected than many evils of far less consequence to the human family. "Common things" more, far more, than things uncommon, require a change for the better. Among thousands of families, it is common to want good fire-wood at the door, where it is needed for cooking daily and indispensable food. This lack of fuel delays each meal, causes many laborers to lose time, which is money; while it exhausts the patience and spoils the temper of the suffering cook. Many a valuable servant has been ruined for life, because the master or overseer failed to provide, as in duty bound, wood for cooking or washing, when these services were exacted. Servants either fall into the vicious habit of loitering by the way in picking up fuel, or they spoil by burning, or rawness, half the bread and meat which they pretend to cook.

The writer has taken some pains to learn how the million live, as the basis of reform in domestic economy. In-

credible is the amount positively wasted and thrown away in kitchens whose owners suppose themselves too poor to buy shovel and tongs to handle fire with, and whose cooking apparatus and table furniture would be dear at the price of a single barrel of corn. It is a mistake to believe that poor people are generally the best economists. In nine cases out of ten, so far as our observations have extended, both North and South, it is the want of economy that keeps young and healthy families poor in this country, however low their circumstances when they start in life. Doing every thing at a disadvantage, and never studying the ways and means of improvement with which a good providence has blessed them equally with the rest of mankind, they toil, and fret, and grumble through an unhappy existence, and die after propagating another generation to follow in the footsteps of their parents.

No one, we believe, has patented a Thinking Machine; but a popular invention of the kind might be very useful. Wise thinking ever precedes wise action; and it is the dearth of the former that impairs the home economy of the masses, in all nations. When biting frost and gnawing hunger moves the natural instincts within us, man essays to think for a purpose. It is the pressure of immediate necessity that reforms the conduct of the million, where reform is most needed, if reformed at all. Nothing short of this fact, amounting to a general law, will satisfactorily account for the universal improvidence of civilized, christian communities. Man's natural improvidence is the grand obstacle to his progress in domestic economy. He is slow to see this improvidence, to make it the subject of serious thought, and, therefore, he remains, from age to age, the same poorly housed, poorly clad, and poorly fed animal that he was in the days of ABRAHAM. How to reach a higher standard of comfort without an increase of labor, is the problem to be solved. One of its phases may be thus plainly and truthfully stated:

This article is written in the house of a tenant farmer in the District of Columbia; and both he and his wife are native Americans.

Their economy permits several chickens to roost on the head-board over the bed on which they sleep, every night; the excuse being that foxes catch their chickens if not brought into their sleeping room. Domestic guano is a valuable article; but its deposit, by dung-hill fowls, on or in one's bed, is carry household economy to a length that but few will follow.

The reckless breaking of door hinges and windows, wagons, carts, harness, plows, harrows, cultivators, axes, shovel, spades, hoes, and other tools and implements of tillage and husbandry, provokes a lecture on bad economy. Habits of negligence and wastefulness in this matter cause the loss of millions every year. No other spirit appears so industrious as that of destruction, both in doors and out, especially if the owner of the premises is much of his time out of the country.

An absent man may find it difficult, if not impossible to enforce rules of good economy; but one who is able to stay on his farm the year round, is happily exempt from all the evils of absenteeism. He has but to study rural

economy in all its bearings on his interest and duty to master the science, and govern his estate according to its best precepts. The perfection of domestic economy, whether in town or country, is to be substantially rich, comfortable, and independent, with whatever means one may possess. One may be nominally well-to-do in the world, yet if largely in debt, it may spoil his system of economy in escaping sacrifices and make-shifts for a time, and lead him into evil practices, in spite of his better judgment. Families living in cities, who go to market and purchase at the highest retail prices, almost every meal they eat, aptly illustrate one feature of poor domestic economy. They are the victims of popular pride, begotten by Poverty on the harlot Fashion. Pride, poverty and fashion are patent elements of discord in the domestic circle, as every reader will bear witness. They affect American agriculture in a thousand ways to the equal injury of the soil and those who own and cultivate it. The man who is the slave of pride, of fashion, or of poverty, endures a degree of bondage more galling and exacting than any other. He really has not time left at his disposal for study and wise thinking. Hence, his inability to sever the chains that bind his limbs, and to shake off the incubus that sits ever on his breast when he lies down to sleep and forget his troubles. The inner man must be educated in greater freedom from the tyranny of fashion, which is the living embodiment of the ignorance of the past, before our domestic habits can be easily reformed.

In seasons of plenty, like the present, vegetable and animal food in the greatest abundance should be well cured and stored away to meet future wants. Dried meats, potatoes, beets, pumpkins, peaches and other fruits may be kept for years.

In 100 pounds of Irish potatoes, as dug from the earth, there are about 75 pounds of water. In sweet potatoes and in esculent roots, and most fruits, the per centage of water is still larger. The best lean meat taken from an ox, a sheep, or a hog, is nearly three-fourths water; and how one can best remove the excess of water from the curds obtained or obtainable from milk, from butter, vegetables, fruits, cereals and meats, to preserve them, involves many interesting questions in rural economy. Curds have long been pressed into solid cheese to preserve them for future use; and in supplying the English and French armies at the siege of Sevastopol with much needed vegetables, the hydraulic press is successfully employed. Cooking, drying and pressing are important arts in domestic economy. The nutritive properties of 100 lbs. of turnips may, by simply slicing and drying them, be condensed into 10 lbs. Cabbages may be consolidated from five to one. Garden vegetables and fruits are no longer to be regarded as peculiarly perishable commodities. Horticulture is to supply its great staples for export, like those of cotton, tobacco, rice, corn and wheat. The science of feeding mankind is in its infancy, and, therefore, likely to grow and improve as human wants stimulate the inventive genius and researches of the age. Pure solidified milk is now carried round the globe for daily use of the common sailor, dissolved in distilled water. He may have fresh peaches, too, with his milk the year round, as he circumnavigates the round world.

PICKLED FIGS.

THE following recipe was alluded to on page 248, August number, but inadvertently omitted in making up our pages for the press. We give it now, with the remark that we do not know of a superior pickle or relish, nor one which will "keep" with so little trouble. Let every good Southern housewife try it:

Select figs of a fair size and good quality—the common large white variety is excellent. When they are just swelling to ripen, but not soft, pick them without bruising, and let them stand in salt and water for two or three days. Then take them from this pickle, put them in a glass or earthenware jar, (not glazed) and pour over so as to entirely cover them, scalding hot vinegar, sweetened with good brown sugar, at the rate of one pound to the gallon, and highly flavored with unground mace gloves, pepper and allspice. (The sugar and spices should be put into the vinegar before it is set over the fire to heat.) If the figs are entirely immersed in this preparation, and put away in a cool place, they will keep good a year or more, although they are fit for use in a few days.

STATE AGRICULTURAL SHOWS FOR 1855.

Name.	Where Held.	Date.
Georgia,	Atlanta.....	Sept. 10—14
Vermont,	Rutland.....	" 11—13
Canada East,	Sherbrook.....	" 11—14
Rhode Island,	Providence.....	" 11—15
do Horse and Cattle,	Providence.....	" 11—15
New Hampshire,	.....	" 12—14
New Jersey,	Camden.....	" 18—21
Ohio,	Columbus.....	" 18—21
Pennsylvania,	Harrisburg.....	" 25—28
West Virginia,	Wheeling.....	" 26—28
Kentucky,	Paris.....	" 25—28
Tennessee,	Nashville.....	Oct. 1—6
New York,	Elmira.....	" 2—5
Michigan,	Detroit.....	" 2—5
Connecticut,	Hartford.....	" 9—11
Illinois,	Chicago.....	" 9—12
Canada West,	Coburg.....	" 9—12
Iowa,	Fairfield.....	" 10—
North Carolina,	Raleigh.....	" 16—19
Indiana,	Indianapolis.....	" 17—19
East Tennessee,	Loudon.....	" 23—25
Alabama,	Montgomery.....	" 23—26
Maryland,	Baltimore.....	" 29—
Virginia,	Richmond.....	" 30—

[to 2d Nov.

FAIR LADIES, AND LADIES AT THE FAIR!

FULLY endorsing the very sensible and pertinent views inculcated in the following article from the *Southern Times*, we take pleasure in adapting them to our own State Exhibition, just now approaching. For the past few years, the tasteful contributions of the fair wives and daughters of the South, have formed one of the most charming and attractive features of our Fairs, and we trust the coming occasion will be honored as richly and appropriately as heretofore:

"Every man who takes an interest in the approaching State Fair, feels the importance of enlisting the Ladies in its behalf. They can do a great deal towards its success. There are so many ways in which they can exert influ-

ence on public opinion and engage the active sympathies of the community in favor of the Fair, that it is scarcely possible for us to exaggerate the aid which they can render, in their own sphere, to the enterprise. The hand of woman is not strong and rough like the hand of man, but it can more easily touch the heart of the world and inspire it to action. A woman's thought is always contagious; it is quickly communicated and sure to reproduce itself in whatever form it may operate. The main thing that we want in connection with the Fair is, the energetic support of the public; and we are confident that the enthusiasm of the ladies will be essential to secure this end. No one doubts that the movement will be of vast service to the State. It already has the judgment and approbation of the people on its side. But judgment and approbation, though excellent in their way, are not the working forces that move mankind. What we need is a living, generous, ardent impulse infused into it—just such an impulse as comes from the household where woman reigns.

Apart from this general relation to the movement, our Ladies can contribute directly to its advancement by the preparation of articles of taste and utility for the exhibition. Modern industry has so much enlarged their field of activity, that they can show skill and ingenuity in various connections. The needle is now an instrument of genius and art, as well as of humble, domestic service. In some hands it is as creative as the chisel of the sculptor or the pencil of the painter. Our Ladies, fully understand what can be done in this particular, and as there is a special department in the forthcoming exhibition for the display of their handwork, we hope that it will present a large array of such objects as gratify the eye of taste and the sense of the beautiful. A word, too, in behalf of the homelier things of household economy. If these are not branches of Art in its legitimate sense, they nevertheless afford a constant exercise for the best of common-sense. No woman of mind feels that her talents are either wasted or unprofitably employed in the offices of home-life. To be a first-rate housekeeper is not beneath the ambition of any sensible and noble woman. It is her business—as much so as it is for man to engage in mechanical, mercantile, or professional pursuits. To view it as a menial thing—a drudgery, is to put contempt on God's law for the practice of industry and the formation of character. Happily for us, our Southern women generally appreciate this part of their duty; and, so far as our observation extends, there is a growing disposition to increase the comfort and attraction of their homes. Domestic economy is certainly receiving more attention than formerly. There is more thought bestowed on it; and as a necessary consequence, our modes of living, even with the same outlay, are much more delightful. We trust that the State Fair will bear testimony to their zeal in this matter. It will be observed that the Committee has offered prizes in this department and we should be glad to see a general competition for them. By all means, let us have the Dairy and the Pantry fully represented. A woman's art, if skillfully exercised, can make the most common article of daily life a luxury. She has genius enough to dignify and adorn any thing that her hand touches; and, for our part, we shall be dissatisfied with any sort of a State Fair, if our women do not distinguish themselves in it. Pray, then, Ladies of Georgia, take hold of this enterprise with the warmth of your heart in every finger, and let it be a close, firm, unyielding grasp. Do all you can to promote its success. Our men will make it represent the farm, the field, the factory, but let us beg, that you strive to render it a fit exponent of Georgia Life in the person and pride of Woman."

✂ A Surveyor's chain is 4 poles or 66 feet, divided into 100 links of 7.92 inches. A square chain is 16 square poles; and 10 square chains make an acre.

THE FAIR—EVENING OR NIGHT SESSIONS.

It has been proposed that the Cotton and Corn Planters, Horticulturists, Breeders of Fine Stock and the promoters of other leading interests—each hold evening sessions during the *Atlanta Fair*, at some convenient place in that city. At those meetings, all matters pertaining to the special business of those in attendance could be discussed, and a great amount of practical information elicited. Such meetings have been held by other Societies with the best results, and we hope to see them inaugurated at our coming Fair.

THE FAIR AND THE RAIL ROADS.—The usual arrangements for carrying articles and live stock intended for exhibition free, and passengers at half price, will be entered into with the different Rail Roads leading to Atlanta.

PRODUCT OF WHEAT IN MISSISSIPPI.

EDITORS SOUTHERN CULTIVATOR—Conversing with a friend, last week, about the crops of the year, he gave me some accounts, which I thought deserved publishing, and asking his consent, he gave it. The county, Attala, on Malone Creek, Attalaville P. O.:

Wm. T. DOLSON sowed $2\frac{1}{2}$ bushels, product $77\frac{1}{2}$ bushels.
J. H. WILLIAMS " 3 " " " $93\frac{1}{2}$ "

Some lands have produced $15\frac{1}{2}$ bushels per acre. One crop, owned by my informant, Mr. WILLIAMS, of 25 acres, has given 310 bushels when threshed, and very certain that there was enough, not threshed, to make 400 bushels.

We are now paying in Vicksburg \$14 50 per barrel, and if 5 bushels wheat make a barrel, this last 25 acres will average some \$40 per acre, and freight paid market. Why will not farmers and planters in the wheat region of Mississippi grow more wheat? Suppose the price should only ensure \$20 per acre, can they not do better than by growing cotton on same lands, considering the advantage of stock and the expense of a cotton plantation?

Yours, &c., M. W. PHILIPS.

Edwards, Miss., July, 1855.

THE CROPS—WHEAT IN MISSISSIPPI—TURNIPS, &c.

EDITORS SOUTHERN CULTIVATOR—I see in your last number that you request your friends to give you short notes upon the weather and crops in different regions of our sunny South. The wheat crop was unusually fine with us this year—averaging some 20 bushels per acre.

We soak our wheat in blue stone, and sow in October and November, about a half bushel per acre* and get a fine stand. Your correspondent, "R. E. H.," Jacinto, Miss., perhaps has his water too strong of blue stone, which may possibly prevent a good stand. My experience is, that wheat, intended for seed, should get fully ripe before cutting; then simply float off the small or light grains and sow in good weather and in good order, and you will not see any smut.

Owing to the dryness of the spring, the Oat crop was almost an entire failure.

The Corn crop was never more promising than now.

The Cotton crop, in many places, is quite likely and in others a bad stand prevails. We have had plenty of rain for some time; but just now begin to need more.

While I am writing I will here indorse the plan of Col. E. JENKINS, of Horsepen, Miss., for raising Turnips, and would say that no farmer need be without them, as there is no difficulty in raising them. As you say, they can be raised upon manured land; and I know that they can be

raised to profit upon good fresh unmanured land. Last year we cleared off six acres in August (the large trees being killed in the spring) and plowed or rather scratched the ground both ways, it being so hard and dry that we could do no more, and sowing a common teacup of seeds per acre, harrowed in, about the 20th of August. Well, from this half-prepared ground we wintered 3 yoke of oxen and 4 milch cows, and greatly aided in the fattening of a large quantity of pork, and in the spring when they commenced running up we could not miss those previously used. We then took up what we wished for seed and transplanted them in the garden and turned the stock upon the remainder (having another patch for spring greens) which in two weeks greatly fattened the entire stock of the farm.

Some of the turnips taken up for seed measured twenty-six inches in circumference and weighed five and three-quarter pounds. If land thus prepared will make such Turnips, what would it do if well prepared?

Yours truly, Y. N. S.

Lindsey's Creek, Miss., July, 1855.

HOLLOW HORN—LETTER FROM CALIFORNIA.

EDITORS SOUTHERN CULTIVATOR—I will take the liberty of suggesting a few thoughts on the subject of Hollow Horn. I have known fat cattle to have the Hollow Horn as well as poor; indeed it is often the case that the disease makes them poor before it is known what is the matter with them; though the poor and ill-treated are most subject to it. I think it is caused by injury or cold, any thing that will produce inflammation in the part, often similar to a frost bite, the circulation becomes impeded and decomposition follows. I have never known cattle, well fed, kindly treated and properly protected from cold and wet, to have it. It is easily cured by pouring a tablespoonful of spirits of turpentine on the head between the horns where the head and neck joins, or by simply boring a gimlet hole in the horn, so as to let the air into the diseased part; it should be bored on the under side to prevent water from getting in it. If the horn is cold you may rely on it that it is diseased, whether the animal be fat or poor. When the disease is very bad, the eyes become sunken and weak.

The Hollow Tail is equally as fatal, which can easily be known by taking it in the hand and pressing firmly between the thumb and fingers, the bone appears to have disappeared entirely, sometimes for several inches. Splitting with a pocket knife or other instrument will relieve it at once.

M. S.

Stockton, California, 1855.

HOLLOW HORN—MORE ABOUT IT.

EDITORS SOUTHERN CULTIVATOR—I see in every number of your valuable work more and more said in relation to hollow horn in cattle, and I live in a country where a great many cattle are raised and have some experience in that disease, both as to its origin and cure; also a preventive. This disease is caused many ways; it is caused by over heat in some cases, particularly with the working ox; and stock cattle that get but a scanty portion of food through winter and spring are subject to it more or less; therefore, hunger and cold weather will produce it beyond a doubt.

I would recommend every farmer to provide his cattle with good sheltering if he wishes to winter his stock in his farm, for I have noticed that cattle are more apt to take this disease in plantations than in the woods; I suppose it is because they are more exposed to the cold and rain in fields than in woods.

I see in your July number that Mr. S. RANDOLPH HARRISON speaks of the hollow tail. I believe, from experi-

*It were better to use a bushel, or five pecks.—Eds.

ence, that the hollow horn produces the disease in the tail; for I have never seen a case of hollow tail but what the horns were hollow. I agree with Mr. HARRISON as to the symptoms and in his mode of curing, only I deem it unnecessary to fill the horns with salt and water. Just pour on the horn a little spirits of turpentine to prevent the flies from interfering with it. This should be attended to every day for a week and the horn examined where it was bored. Sometimes they fill up with blood and dirt, it should be kept opened well. Your correspondents speak frequently of a preventive; they mostly recommend good feeding and good sheltering, &c.; but that we must do with stock of all kinds.

My preventive, Messrs. Editors, is to do away with the horned stock entirely and raise buttheads. The no-horns never have this disease at all. They are more hardy and generally better disposed. This has been fairly tried on the road from Tennessee and Kentucky to Virginia by beef drovers. They pay one dollar more per head for the buttheads than the horned stock.

I could mention many more advantages that the buttheads possess over the horned cattle, but for fear that I weary you I shall close. Respectfully, A. S.

Brooklyn, Ala., July, 1855.

SEA ISLAND COTTON IN TEXAS—HOW GIN AND PREPARE IT FOR MARKET?

EDITORS SOUTHERN CULTIVATOR—You, or some one of your subscribers, will oblige me and many others in this vicinity by publication, in your very valuable paper, of some information as to the best and most economical mode of preparing long staple cotton for market. From experiments made it has been found that this region of country is well adapted to the growth of Sea Island cotton, and a number of us have planted it, believing that the Parkhurst Gin would separate the lint from the seed without injury. But, from the best information had, it is supposed that this gin will not answer the purpose. An agent has just passed over this country for the purpose of selling McCarray's gins; but there are so many humbugs now-a-days I am afraid of new things. Is this the best gin for the long staples? If it is, I would like to know how much per day it will gin?—what power it will take to work it?—and what is the price of them in Georgia or Carolina?

An article on the cultivation, picking, gining, packing, &c., and the state of the market, present and prospective, of Long Staple Cottons would be read with much interest by the subscribers to the *Cultivator* in this region of country.

Very respectfully your obedient servant,

P. W. BROWN.

Coletto, Goliad Co., Texas, July, 1855.

Will some of our Sea Island friends be kind enough to answer the inquiries of Mr. BROWN, through the *Cultivator*? Farmers and Planters should neglect no opportunity of teaching each other.—Eds.

A GOOD EXAMPLE—SUGAR CROP OF LOUISIANA.

EDITORS SOUTHERN CULTIVATOR—Several of your subscribers happening to meet in Alexandria a short time since, (your humble servant being one of the number) and the good that had and was likely to continue to arise from the circulation of your valuable paper being the topic of conversation, we resolved, among ourselves, each to add, if possible, one new subscriber to your subscription list; and from the enclosed you will see that I have kept my promise, hoping, as I fervently do, that the balance may also succeed.

I wish some of our old and experienced Sugar Planters in Louisiana could be induced to give you, for publication, their experience in the saving of sugar cane for seed; the best mode of planting; cultivating, &c.

The Sugar crop on Red River cannot possibly exceed a half crop, and it is thought by some that it will not be, on an average, more than a third, owing to the seed cane spoiled. I have neither the talent nor education for it, or I should make a strenuous effort to arouse the Sugar planters upon the subject of saving seed cane, and, if possible, endeavor to guard against the recurrence of the calamity that has befallen the sugar interest in Louisiana the present season. With the best wishes for your success, I remain, Your friend and obedient servant,

G. G. McP.

Alexandria, La., July, 1855.

FODDER PULLING DEFENDED.

EDITORS SOUTHERN CULTIVATOR—It is not pleasing for me to differ in opinion from those whom I hold to be correct in nearly every opinion advanced, but I am one of those who must be convinced by reason before I give in to any opinion you believe or expressed. In the July number of the *Cultivator*, you say that the saving of fodder in the usual way is a useless practice,* and that the planting of a separate piece of land for that purpose is far preferable. Now, in this we differ widely, and I would say, why give up that already made? viz: the fodder on your corn crop, for a new crop that, of course, would need additional cultivation and have to save it many times while your corn or cotton needed work; and more than that, the stalks of corn I find hard to cure, and while we can make a crop of corn, fodder and peas on the same land and have the balance of our land in pastures for our stock there will never be in the South many separate crops of corn and peas made expressly for fodder and hay.

I make much better peas to plant them with my corn crop in hills between the rows, say from the 25th of May to the 1st of June and give them one working which the corn also gets in laying it by, and I pulled and saved, last year, fifty stacks of fodder in one week, enough to do my plantation twelve months, and also made corn to sell, and the fodder saved in a leisure time when nothing needed work. Some think that taking the blades off injures corn. I admit it will do so if pulled too green; but by waiting until the milk leaves the grain and the shuck commences to turn yellow I think little or no injury is done to it. A piece of good land prepared and sowed in some suitable grass for hay—and kept as a meadow for that purpose—would, no doubt, meet the farmer's views better than your plan; but separate crops of corn and peas cultivated for fodder and hay especially, will, I think, never be practiced much in the South while the same land brings to perfection all under the same culture.

Peas are called the clover of the South, and much advantage, no doubt, may be derived by sowing them on worn lands and turning them under while green, as a fertilizer. All farmers should endeavor to keep up their land by horizontal plowing, hill-side ditching and manuring of some sort; after that, the one who makes the most by the least labor I consider the best farmer. E. JINKINS.

Horse Pen, Choctaw Co., Miss., July, 1855.

* We did not say "useless"—our language was, "Fodder pulling, we consider a slow, laborious and poor business." &c. For our reasons see "Work for the Month," in July and August numbers. Let our correspondent test the loss of weight and substance from the grain, by fodder pulling, one or two seasons—trying, at the same time, a few acres of drilled corn for green forage and hay—and, our word for it, he will acknowledge himself convinced.—Eds.

THE "RESCUE" AND TALL OATS GRASSES IN PENNSYLVANIA.

EDITORS SOUTHERN CULTIVATOR—As several of your Southern correspondents have given their experience of the "Rescue" Grass, in the July number the *Cultivator*, it may not be amiss to give a short notice of its "prospects" in this section—latitude 40° north.

Through the kindness of Mr. IVERSON, I received a package of the seed by mail last autumn. Doubting its hardiness, to withstand our cold winter, as a precautionary measure, I sowed only one-half the seed in the fall; it came up well, but the very dry condition of the ground prevented it from establishing itself as it would have done had the soil been more moist. The result was, that, from drouth or cold, or both, every plant perished. The balance of the seed I sowed about the 1st of April; this grew and is now in flower, promising to produce an abundance of seed; it is from six to twelve inches high; is very sparse in leaves, and would, consequently, produce a very light crop of pasture or hay. Comparing it with our Timothy or Red Clover, it will produce less than one-tenth of either of these grasses. Consequently, it will be of no value so far north.

In this connection, I may also mention a species of wild grass sent me by Mr. STANFORD, of your State, and which he designates as "Wild Oat Grass," said to have been found in the mountains of Arkansas, or Rocky Mountains—uncertain which locality. This grass was sowed alongside of the "Rescue;" is much hardier, and withstood our severe winter—slightly injured. It is now, both fall and spring sowing, in flower; grows two to three feet high, with a profusion of leaves; it would cut a heavy swath, and may become valuable for pasture or hay. From its close resemblance to our "Tall Meadow Oat," I consider it to be closely related to that variety of grass.

Both of these grasses, from their early inflorescence, may possibly prove to be annual, or barely biennial; and if so, would not be near so valuable as perennials. Should the "Wild Oat Grass" remain on the ground without deteriorating for two or three years, it may become a valuable acquisition to our list of grasses, and peculiarly so to the South. Respectfully, J. B. GARBER.

Columbia, Pa., July, 1855.

RESCUE GRASS—BROMUS—CHEAT, &c.

EDITORS SOUTHERN CULTIVATOR—I bought from Col. B. IVERSON a peck of his Rescue Grass seed at \$5, and sowed it according to his directions the first of September last. The ground was very dry and hard and was not plowed sufficiently deep. It was, however, put in pretty good order, and the seed sowed in drills 18 or 20 inches apart. It did not come up for several weeks and, consequently, had but a short season for its growth. Between December and the first of April it was hoed three times. It grew finely and looked well through the winter. The ground was tolerably rich, but not manured. On the 21st of May, observing the seed to be dropping very fast, although a considerable portion of it was still green, I had it cut with reaper-hooks carefully and put in a barn with a tight floor, where it remained until the first of this month. A fourth of the seed must have dropped. The ground was covered with it. I saved a little over ten bushels of seed. Two bushels, when cleaned, weighed 42 pounds. I have no doubt, if sowed in good ground, that it will make a good winter pasture. Being an annual grass it may require more labor than cotton planters can afford to put on for hay.

Further experiments are necessary to prove its usefulness in renovating worn-out lands. Col. IVERSON gave it the name of Rescue Grass, but he applied to a friend who is a botanist to give him its botanical name and character.

He, however, being unable to satisfy himself, sent a specimen to Dr. TORREY, an eminent and well known botanist, and Professor in the University of New York, who informed him that the name of the grass was *Ceratochloa Breviaristata*, (short awned horn grass,) and referred him to HOOKER's late work on Botany, for a full description of it. I could not find this genus in any of my botanical books and, of course, came to the conclusion that it was a new genus and something super-excellent. But when it began to blossom and go to seed I could examine it for myself, which I did, and found all its botanical characters to agree with Bromus, a family of grasses described by LINNÆUS, and contained in all the books of Botany. The elder PLINY, in his Natural History, speaks of a grass which he calls Bromus and is translated wild oats. LINNÆUS retained the name for this particular family of grasses and his Bromus Secalinus is what we call Cheat, a pest in wheat fields. The *Ceratochloa*, if I am not very much mistaken, is only a new species of Bromus, and first cousin to Cheat. It is a real winter grass, seeds itself, spreads and grows vigorously. I would advise small grain farmers to beware of it.

Let a field be sowed in Rescue Grass in the fall and pastured or followed the next winter, spring and summer and the succeeding autumn sowed down in wheat, there would most certainly ensue a contest between the grass and wheat and the victory would be on the side of the grass. Bromus is a better name than *Ceratochloa* and means the same thing except the horn, which does not hold good because there is no resemblance between the awns of the grass and the horns of cattle. It may, with more propriety, be called Bromus Breviaristata—Short Awned Broom grass. If I am mistaken, I am very willing to be corrected. Botanists are much too fond of endeavoring to signalize themselves by altering and giving new names to old genera thereby making confusion and retarding improvement. Respectfully, your obedient servant,

W. W. A.

Stateburg, S. C., July, 1855.

P. S.—I send you, enclosed, specimens of Cheat, taken from my wheat field, and of the Rescue Grass, which I obtained from Col. IVERSON. You will see the family likeness. You must not judge the size of the Rescue Grass by the specimen. I chose small stalks to go in my letter.

W. W. A.

REMEDY FOR BLIND STAGGERS IN HOGS.

EDITORS SOUTHERN CULTIVATOR—I see in the July number of the *Cultivator* a request of S. W. McGEHEE, of Arkansas, requesting information in relation to diseased hogs. I feel confident from long experience that if it is the Blind Staggers he alludes to, I can inform not only him but all others of my brothers how to cure the worst cases of that kind I ever saw.

Take one small teaspoonful each, of table salt and cayenne pepper (common red pepper will do) and mix together; take the diseased hog and split the skin in the center of the fore head, opposite to the brain, with a knife, to the bone, say one-half to two inches long, making a small insertion, each way, between the bone and the flesh and put the salt and pepper in; draw the flesh together, taking one stitch with a needle and thread to hold it together in the center, then apply soft tar to draw it and keep off flies, and my experience for 25 years ensures you a cure.

I have no doubt but it would cure similar disease in all other animals.

CLISBE AUSTIN.

Tunnel Hill, Ga., July, 1855.

SERENITY OF MIND.—Serenity of mind is nothing worth unless it has been earned. A man should be at once susceptible of passion; and able to subdue it.

DISEASE IN HOGS, AND A REMEDY.

EDITORS SOUTHERN CULTIVATOR—In the July number of the *Cultivator*, I noticed a communication from S. W. McGEHEE, respecting a disease in his hogs, which has proved fatal.

Having suffered a similar loss a few years since, I will give my experience, in hopes that he and others may be benefitted. During a long wet spell in the spring I noticed that my hog and shoats were affected with a cough, appeared languid and refused their feed; some would have the staggers and in a short time die; those having the cough only, would rapidly become worse; heave dreadfully and in a few days die, apparently from suffocation. I tried a number of remedies without effect, and on opening the hogs discovered all the appearances of pneumonia as presented in post mortem examinations in the human subject. In the meantime I obtained CLATER & YOUTT's Cattle Doctor, by SKINNER, in which I found a description of "Inflammation of the Lungs, or Rising of the Lights," and, on page 241, directions for bleeding in the leg as follows: "A largar quantity of blood, however, can be abstracted from the vein on the inside of the fore-arm about an inch above the knee. The application of cold water with a sponge, will generally stop the bleeding without difficulty, or at least so far arrest it that no harm will be done if it should continue a little longer." In bleeding I tied the leg above the knee with a rope, sufficiently tight so that the vein became full, then feeling on the inside of the leg, just above the knee, I found the vein, and, with a sharp pen-knife, split the skin, which brought the vein in full view, which I then opened and suffered the blood to run until it became of a bright red color. I bled in both legs at the same time, if the hog was large; I then turned them in a dry lot with shelter and fed upon wheat bran, mast, or Oats.

The above plan is the only effectual treatment according to my experience. Yours truly, M——.

Dahlonega, Ga., July, 1855.

CULTURE OF LUCERNE.

We have been informed by Mr. Lewis Mabry, of this city, that he has cultivated Lucerne regularly for more than forty years with the most satisfactory success. It has invariably supplied him with the greatest abundance of green food of the richest quality for soiling cows, and it makes a hay in all respects equal to clover. There are plants now in Mr. Mabry's yard which have been there for forty years. He has usually had about two acres of ground in lucerne and his mode of cultivation is as follows:

The land should be well and deeply prepared, as the plants send down their tap roots to a great depth.

The soil should be dry and rich. The time for sowing the seed is in September, and they should be sown broadcast. They soon vegetate, and the plants continue to grow vigorously during the fall, and acquire sufficient strength to withstand the severity of the coldest winters. In the spring they start off to grow in advance of all other vegetation, and take entire possession of the ground. If the seed is sowed in the spring, the grass will overtop and smother the lucerne, unless it is drilled, in which case it requires frequent and careful workings. It should not be sowed with any other crop. When sowed in the fall, it will furnish two cuttings the next season. The second season it will be fully established, and yield as many as four cuttings, which it will continue to do for four years. By the expiration of that period it will begin to die out in patches, and another sowing should be made. The plants should not be suffered to bear seed any further than is necessary for new growths.

On the whole, Mr. Mabry considers Lucerne as invaluable,

particularly on small farms, from the great quantity of food it supplies; thus, enabling the possessor of only a few acres to keep a number of cows, which, in their turn, furnish abundant means of enriching the land, besides, affording the owner the luxury and profits to be derived from a good dairy. We would especially recommend to our farmers in the neighborhood of the city to make the experiment. With milk at a sixpence a quart, and butter at 50 cents—never less than 37½ cents a pound, the advantages to be derived from a dairy appear to us to be very decided.

Mr. Mabry informs us that the *Alfalfa* clover, about which we made some inquiry a few weeks ago, is nothing else than Lucerne.—*Southern Farmer.*

DYSPEPSIA.

EDITORS SOUTHERN CULTIVATOR—Your Mississippi correspondent "OMO," is down upon nostrums and nostrum venders, to which your writer, also from Mississippi, says Amen, and Amen. These vile pests of society care no more for your health, kind reader, than do the stay-makers. They make their nostrums that they may make money, and so do your corset, lace jacket makers; neither of whom—the makers or venders—know who will use, nor care they, provided they be paid. From Old Swain, of Panacea memory, through Bull and Townsend, down to the last subterfuge to steal money out of your pockets none of them ever made a nostrum that they cared one iota about, only that it might add to their sales. "Omo," from his writings, must be an M.D., and is not likely to do the good that his warning ought to, as many silly people will think he is actuated by a sordid motive. Too many of our race think no man is stirred up to do a good thing without having self-interest in view. Of course, we excuse all such for unkind surmises; they are ignorant of generous impulses, of public spirit, of "doing unto others as ye would they should do unto you." Your writer is also an M.D. since March 1829, from Pennsylvania University, but never being able to overtake the profession, in three years pursuit, quit the hunt and took to the cotton patch. Knowing something of Dyspepsia, caused by the habit of smoking tobacco, and too rapid eating, he offers his counsel, and without charge. He would say, don't take physic, even, "with the advice of a good physician," but if you will take it, it is better, it is right to kill yourself scientifically; therefore, "you should always apply for your medicine" to an M.D. Use water to the whole body, with a towel every morning; wipe dry with a coarse towel; take, soon after, a little moderate exercise in the open air, and form the habit of taking a tumblerful of cold water before breakfast. Let your diet be plain and simple, as little of varieties, condiments, sweet meats, deserts, fabricated liquors, &c., &c., as the servants of our farms are allowed. Be certain to take exercise daily, the hoe, rake and axe, is the best. The sun has a healing influence, not at its heat; and heart in its light and cheerful beams. Be not afraid of a little sun-burning. Be healthy, and care not to be fair.

AN OLD M.D.

SNAKE BITES.

EDITORS SOUTHERN CULTIVATOR—Your July number, received this evening, contains recipes for Snake Bites, on page 238. Allow me to add an old one, which has again and again, been published, and which should be published yearly, to keep all people in remembrance. It is the free use of ardent spirits, an article, though, too often pernicious from its quantity, yet in this case more advantageous from its being in every vicinity, if not in the possession of every family. Not so with olive oil or plantain and hoarhound.

A few years since I was informed by a friend, whose word was reliable, that he had seen a cure effected by the copious use of whiskey, in an Indian family, even where swollen tongue and intense thirst had existed. I called attention thereto through our press, which soon passed from paper to paper, and I have the gratification to learn that even in our own vicinity life has been preserved from such newspaper readings. The same recipe appeared in the old *American Farmer*. I think, even, perhaps, 10 years before I heard it related, which, I presume, escaped my attention, from its exceeding simplicity—seeming unreasonable. I have heard of frequent cures, and now believe that whiskey is a sure relief, if it can be administered in time. I learn that if the patient can be made intoxicated the danger is past. The idea is, to use it as a "soot" uses it, to make one below the level of the brute; for it is said that man alone becomes below the brute by liquor.

Yours truly, M. W. PHILIPS.

Edwards, Miss., July, 1855.

SMUT IN WHEAT—LOCUSTS—WILL COW PEAS KILL HOGS?

EDITORS SOUTHERN CULTIVATOR—I design offering a few thoughts on three different subjects, in this single sheet, hence must be very paragraphic.

SMUT IN WHEAT.—In answer to R. E. H., upon this subject, in the July number of the *Cultivator*, I would say I am not a very extensive wheat grower; I raise only for my own use. I always sow the wheat raised the same year, and never had a head of smut in my life, that I know of. How long this may be the case I cannot tell. It is rapidly encroaching upon the planters in this country. I keep my wheat in a small framed house built for the purpose, which holds about 300 bushels, the top of which rolls off upon small wheels let into the plate holding the roof. This roof is run off every day during the hot weather until the wheat is as dry as powder. It is my own invention, made to keep clear of weevil. I have used it some six years with the most perfect success. Whether it will prove sufficient to keep out smut in the future I am not prepared to say, but would recommend it to R. E. H., and all other wheat growers. I am ready to give any further information in my possession, if desired. I am so pleased with this method of putting up grain, that I have, built others for seed oats and stock peas.

LOCUSTS.—I intended to have replied to some Ohio Editor, who, as I learned from an extract in some of the newspapers, was, in a very praiseworthy manner, seeking information in reference to those parts of the country where the locusts would make their appearance this year. This was not the year for them in the western division of the State of Tennessee. If I have reasoned correctly they will make their appearance here in 1859; that will complete the cycle of 13 years which has governed them since the time of my limited observation. They were here in great abundance in the year 1833. All over the country, in the year 1846, they were equally as abundant, except on the lands which had been cleared prior to 1833. When they make their next return I presume they will not appear to any extent on the lands which were opened previous to 1846. Orchards which have been set, since 1846 in this country upon lands cleared before that time, I do not think will be much troubled by them. I know they have the power of locomotion, but whether they gather to any great extent upon trees and shrubs removed from the place when they come out of the earth is a question; perhaps your correspondent, J. R. S., can inform us.

WILL COW PEAS KILL HOGS?—There is yet another question upon which I wish to be heard, for the benefit of all the readers of the *Cultivator*; I need information myself, and perhaps you, Messrs. Editors, or some of your

numerous and experienced correspondents can give it. The question is, "Will stock peas kill hogs?" I am quite unwilling that any planter should get into the same scrape that I did in the winter of 1853. I intended to set forth my experience on this subject before now, but the pea crop of 1854 was so trifling all through this country that I thought there was but little chance of any damage from excess of that article. The present crop bids fair to do much better, and the time is now close at hand when all on this question should be known. I design presenting a simple narrative of facts and let every one draw his own conclusions. I had about one hundred acres in corn well set in peas with a cross fence dividing, and a plenty of water. Previous to putting the fattening hogs in, sometime in October, I had a quantity of peas pulled up and cured and stacked on long poles placed in forks, then poles one above the other with the peas lashed over these poles. Commencing on the bottom pole in the first set of forks about two or three feet high, and then the second, some five feet, and the third and last pole, about seven feet from the ground, which, when finished, makes a most beautiful stack, resembling what is termed a top stack—broad at the ground and tapering almost to a point at the top. All things completed, I put in about 100 head of fattening hogs in one-half of the field, which remained about six weeks without any damage from peas. They were taken out and put on corn to complete the fattening and the stock hogs let into the field with the cross fence down that they might have the benefit of the other half. They fattened very kindly and seemed to do remarkably well. When the winter had far advanced and the peas had nearly failed, I sent a boy down every day or two, to throw over some of the stacked peas to the stock in general. In riding around the field I soon discovered several dead hogs, and enquired of the feeder how it had occurred. He attributed it to the horning of the cattle when he went to feed. I concluded if that were the only cause, that was not sufficient to take the trouble to separate them and haul the peas to them, and told him to open some holes in the pens around the stacks and let all the smaller ones in, and did not give myself much concern about it, as every thing was as fat as could be desired. Some days after this I rode over the field to see how the stock looked, and, to my great dismay, I found about 100 dead. Out of 100 shoats (about the proper size to mark) put in, I could not find but about 30 living, and these included, mostly, some shy ones which had never got in the pen. They were lying in the pens where the peas were; piled up sometimes three deep. It is clear to my mind that the stacked peas killed them. None died till they were fed with them, and those died most that eat most. I hastened to get them away, and a few died after taking them from the peas. I continued to feed horses and oxen on them and they did well. Can any body explain?

We have raised the largest crop of wheat in this county ever before known. Corn crops were never more promising. Oats are trifling. Cotton is a little better than common.

Respectfully, J. A. T.
Near Brownsville, Tenn., 1855.

GATE LATCHES.

EDITORS SOUTHERN CULTIVATOR—Two of the indispensable good things about a good farm are good gates and good latches.

If I can do so without the aid of cuts, I desire to give your readers some instructions for making an excellent latch; one that will resist all attempts from cattle, and never fail to secure your gate, however much it may sag. Get out a piece of wood just *three feet long and two inches square*. Now, with your square measure off fourteen inches, and with your pencil strike a line, from this line commence bevilling off till you reach the end of your piece

at one half of its thickness, which operation will give it somewhat the appearance of one half of a wedge. Now, you perceive, this will never do for a latch, as it now stands, so we must go to work and make it spring; to do this take your square and pencil and draw another line, half an inch from the first one you made, and about four or five inches from the other end make another, then take your drawing knife and work down between these two marks till you have reduced it to the thickness of a little over half an inch; after you have done this your work should look as if it had been laid off with a gadroon. Now, by nailing the bevelled side of this piece on the front of your gate frame and near the bottom, you will see that the top end stands off from the gate, and by pressing it to and from the gate you will perceive that it springs, but to give it strength we must do a little more to it. Get out another piece twelve inches long, two wide and half an inch thick. This should be made of hard wood, and morticed in your latch, before you have nailed it in place, some two or three inches from the top, and as this piece must run through the gate frame, you must make a mortice through the frame and sufficiently large to allow this handle to play freely. To use this latch, the gate should not be hung in the usual way, viz: instead of swinging between the two posts, it must strike against the post, (which should be at least twelve inches in size and left round, about one-fourth from the edge. You may use the common catch, only you must drive it in the post up and down, so that the latch may catch it as it strikes the post. By inclining your posts a little the gate will close itself. To use this latch for a gate that opens both ways, place your posts so far apart that your gate may swing between them, but your catch is to be let in the post so that the latch may catch in passing. To make this catch, get out a piece some ten or eleven inches long, and after rounding it something like a cradle-rocker, make a notch wide and deep enough to receive your latch, and your work is done.

My post office is Law Dust, Columbia co., Ga., at which place I may be addressed by any requiring further information.

Respectfully,

J. M. HATCHER.

Richmond Co., Ga., July, 1855.

Horticultural Department.

WORK FOR THE MONTH—(SEPTEMBER.)

[SEPTEMBER, now the ninth, was anciently the *seventh* month, as is indicated by its name, which is derived from *septem*, signifying *seven*. It answers to *Tishri*, or *Ethanim*, (1 Kings viii. 2,) the first month of the civil and the seventh of the sacred year of the Jews. Our Saxon ancestors called it *Gerst month*, or *Barley-month*, because barley ripened with them at this season, and also *Harvest-month*, or *Harvest-month*.]

THE PLANTATION.

Cotton will now begin to open fully, and all hands must be set to picking, without delay. See that the lint is picked clean, and free from trash; and do not gather it immediately after a rain. It will dry better upon the stalk, than any where else, and nothing is lost by letting it rest for a day or two. Let your Gin and Press be of the best patterns, and in complete order; and see that all operations connected with the ginning, pressing and getting ready for market are performed in the most thorough and perfect manner.

Cow Peas.—After a shower, and while waiting for your *Cotton* to become dry enough to pick, set the hands to gathering, drying and putting *Peas* away.

Rye, Clover, Lucerne, Barley and Winter Oats may be sown the latter part of this month.

Turnips.—If not already sown, or if your first sowing did not come up well, lose no time now in putting in *Ruta Baga, Yellow Aberdeen, Strap Leaf Red Top, large Norfolk* and other *Turnips*. (See directions in July and August numbers.)

Hay.—Cut, cure and put away an abundance of hay, for the winter food of stock. Should you be short of fodder, make hay from Sweet Potato vines. Do not cut them until just before the first frosts in October, at which time the tubers will probably have ceased growing—cure the vines well, put them away under cover, and you will find that your cows, mules and even horses, will eat them with a good relish. Good fodder may also be made from the tops of the *Pindar* or *Ground Pea*, if cut or pulled before they wither.

Weeds, Brush, &c., may now be cut up, swampy land drained, woodlands prepared for pasturage, &c., &c., as heretofore directed.

THE GARDEN.

Turnips, of all kinds, if not already sown, should be put in without delay. (See August number for full directions.) A full crop of *Onions*, to plant out in October, may now be sown. Sow genuine *European* seeds of *Carrots* and *Beets* any time this month. Sow, also, *European Cabbage* seed. Set out all the *Brocoli* and *Cauliflower* plants you may have on hand. Plant *Snap Beans*, and, if the weather is favorable, you will get a supply for pickles in October. *Spinage, Lettuce, Radishes, Cress, Mustard, &c.*, may now be sown. *Celery* should be transplanted, and in dry weather haul earth to the stems of that which you have heretofore transplanted.

STRAWBERRY BEDS.

Strawberry beds or patches may now be prepared, and vines planted at any time during the fall or winter. A cool, moist, soil, rich in vegetable matter, suits the *Strawberry* best, in our Southern climate. Subsoil the ground, or spade it as deep as possible, turning under an abundant supply of swamp muck, decomposed leaves, wood ashes, pulverized charcoal, and a little well rotted stable manure. Harrow or rake the surface, making it fine and even, and set your plants in rows 3 feet apart, and 1 foot to 18 inches in the row. After the plants become well rooted, cover the whole ground with partly decomposed leaves from the forest, leaving nothing exposed but the leaves and fruit stalks of the plants.

THE FLOWER GARDEN AND SHRUBBERY.

Remove layers of the *Carnation*. Plant *Bulbous roots* for early blooming, last of this month. Plant cuttings of the *Chrysanthemum*. Plant *Anemones* also. Dress your borders, and trim and plant edgings. Spade and fork over vacant places, and prepare for future use. Plant cuttings of *Heart's Ease*, and trim off dead leaves from old plants. Clip *Hedges* of *Privet, &c.* Plant out seedlings—also *Polyanthuses, Ranunculuses, &c., &c.* Gather all seeds as soon as ripe, and store away carefully in a dry, shady place.

A NEW FLOWERING SHRUB.—We are under especial obligations to our correspondent, J. VAN BUREN, Esq., of Clarksville, Ga., for a beautiful picture of a new species of *Rhododendron*, supposed to be almost entirely unknown to scientific botanists. The drawing represents the stalk, leaf and flower, faithfully colored from nature, and of exquisite finish. We should be delighted to offer a *fac simile* of it to all our lady readers; but as our type and printers ink possess none of the "magic skill," of our friend's brush and pencil, we shall be obliged to forego that pleasure, and present merely the history and description of this superb shrub, which Mr. V. B. has kindly furnished. This article will appear in our next number.

NEW HEDGE PLANT.—It is said that a shrub has been discovered near San Antonio, Texas, called Guisachi, which bids fair to equal the Osage Orange or Cherokee Rose for hedges in the South. The spines or thorns are very numerous and formidable, which is a great desideratum in the formation of live fences. This subject is worthy of experiment by all those who are situated near regions where this plant can be obtained, and if successful it should be made known to the public.

PATENT OFFICE NOVELTIES.

A NEW OIL PLANT.—The small tree (*Castiglionia lobata*) known in Peru under the name of "Pinoncello," and cultivated about Surco, Huacho, and Sambagque, also growing wild in considerable abundance in those regions, it has been ascertained, yields a valuable oil well adapted to the purposes of illumination. Its bean like fruit, or seeds, when roasted, have an agreeable flavor, preferable to that of the olive. When eaten raw, the ethereal oil generated between the kernel and the outer skin is a strong cathartic, the effects of which can only be counteracted by drinking cold water. It has been ascertained that the seeds will grow in Baltimore; and doubtless plantations of this tree might be formed in many parts of the South from which vast quantities of oil might be produced, and thus add another link to the great chain of our national wealth. We understand that the Patent Office has taken measures to procure some of the seeds of this tree for trial in the South and South-west.—*Washington Union*.

THE JUJUBE TREE.—The seeds of this tree were imported a short time since from the South of Europe for experiment in the South. It grows in the form of a shrub of middle size, bearing a red oval fruit about as large as olives, inclosing a stone of the same shape. They are sweet, but only eaten among us in the form of a paste. In Algiers, the fruit ripens in the month of June, and is much sought after by the inhabitants, who consume large quantities, both fresh and dried as well as in the form of a delicious paste.

[We have, in this vicinity, a number of Jujube trees, that have borne fruit for years.—Eds. So. CULT.]

CUTTINGS OF THE ZANTH CURRANTS.—There have been introduced from France the cuttings of the Zante currant—a variety of small grape—which have been distributed in the Middle and Western States. This variety of fruit, so well known as entering into the composition of some parts of domestic cookery, should it succeed, will add to the numerous varieties of choice fruit which have been introduced within the last few years into our country.

CHUFAS, OR EARTH ALMONDS.—There have lately been procured from the south of Spain a barrel of Chufas for public distribution. This is a new esculent in this

country, known to botanists under the name of *Cyperinus esculentus*. It grows spontaneously in the light, humid soils of Spain, and is also cultivated in Germany and the south of France. It grows to a height of about three feet, on a triangular stalk or bush, with spreading head, bearing yellow flowers, which are succeeded by long ears. The roots are fibrous, of a reddish color, bearing small tubers about the size of a common bean, and are known to the Spaniards by the name of "chufas." If planted in May or June they are ready to be harvested in October. They resemble, in taste, a delicious chestnut or cocoonut, and like them may be eaten raw or cooked. They are chiefly employed for making an orgeat (*orchata de chufas*)—a delightful, refreshing drink, much used in Spain, Cuba, and other hot climates where it is known. When mashed to a flour, which is white, sweet, and very agreeable to the taste, it imparts to water the color and richness of milk. At Almacero and Alborayo, considerable attention is devoted to the cultivation of this plant, eight acres of land yielding a profit of \$3,500 in five months. This may be attributed, in a degree, to the advantages of irrigation on the sandy soil of that region.

The following extract is from a letter dated New Orleans, May 9, 1855, from an officer in the army to the Commissioner of Patents:

"I send you herewith some seeds for distribution, used here in the cure of the bite of the mad dog. It is considered as an effectual remedy in the parish of St. Bernard of this State, and the cures which are stated to have been effected from their use are certainly very remarkable. I regret not being able to give you their botanical name, but the plant is a tropical one, coming from Mexico—I believe from the department of Tabasco. The seeds are called here, '*graines contre la rage*,' and are used as follows:

"Three of them are broken up or pounded into small pieces, and put into a wineglass of the best sherry (Xeres,) and allowed to steep for about 24 hours, and then being well stirred up, swallowed by the patient. The dose is repeated three times a day for about 9 days, when the person or animal may be considered as cured. I am told that even dogs that have been bitten by a rabid animal have been cured by this treatment, or by putting a larger quantity of these seeds in their food.

"The seed must be soaked in water 24 hours before planting, and the plant must be protected from the rays of the sun while still young and tender. It resembles much the okra plant, and should be planted late in the spring."

A HORTICULTURAL NOVELTY.—The agricultural branch of the Patent Office has taken measures to procure seeds of the Bun-ya bun-ya, a tree of the fir tribe, growing in Australia, where it flourishes in a region of not much greater area than thirty miles square. It bears a cone nearly two feet in diameter filled with seed the size of an olive, and of flavor more rich and delicate than that of the pine apple. It is so much esteemed by the natives that they at times travel hundreds of miles to partake of it.—*Washington Star*.

THE CORK TREE.—About a hogshhead of acorns of the cork oak have been introduced from the South of Europe, and distributed in the Middle and Southern States for experiment, or to test their adaptation to the climate. This tree, in its native country, where it is an evergreen, usually grows to the height of 20 to 30 feet, but in England there are specimens which exceed 50 feet in height, with a diameter of more than 3 feet. The substance familiarly known to us as cork, is the epidermis, or outer bark, and sometimes grows 2 or 3 inches thick. Should the experiment succeed, it will be a subject of great national importance that plantations should be established in various parts of the country for the purpose of growing this useful

substance, particularly in the event of a war between this country and Europe, in consequence of which the supply would be cut off.—*Union*.

FIG CUTTINGS.—In addition to the cuttings before mentioned, there have been imported from the south of France some choice varieties of the Fig. They are designed for experiment in Southern and southwestern States, where it is known that this product thrives well. As the fig is a great luxury, either in its green or dried state, we trust that before many years it will be multiplied to that degree which will render it as common in Southern markets as the orange or any other fruit. From some experiments made in Alabama, it is found that, with sufficient enterprise and a judicious expenditure of capital, figs can be cultivated with great profit by drying, for the supply of other States.

THE FLOWERS OF TEXAS.

THE editor of the *Texian Advocate* thus describes the floral beauties of the forests and prairies of that fertile region:

Texas is emphatically the land of flowers; and April is the month in which they exhibit their varied loveliness in the most ample profusion. Whilst it is necessary for the lovers of flowers in other climes to cultivate them carefully, to protect them from northern blasts and untimely frosts, our prairies, and even our wood lands are one vast flower-garden, of rare beauty and rich fragrance. During the spring months, our wild flowers present a great variety of colors—red, violet and pink predominating. But as the season advances, and the sun's rays become more intense, yellow and white become the prevailing colors, and are frequently so brilliant and numerous as to pain the eye of the traveller with the intensity of their dazzling splendor.

We love flowers. They are intimately associated in our remembrance with a happy period of existence, when all scenes were delightful—when the stern realities of life were unexperienced and unknown.

"'Twas a lovely thought to mark the hours
As they floated in light away,
By the opening and the folding flowers
That laugh to the summer's day.
Oh! let us live, so that flower by flower,
Shutting in turn may leave
A lingerer still for the sunset hour,
A charm for the shaded eve."

PLANTS IN A BED-ROOM.—Mr. D. Beaton, in the Cottage Gardener, remarks that "although it is quite true that plants do vitiate the air of a room to comparatively a fractional degree, it is equally well ascertained that they consume and destroy a very great deal of foul air; and that without foul air, such as would kill a man, plants could not be kept alive at all. We gardeners know this fact from every day experience; we cannot grow plants so well, or so quickly, in the sweetest air, as in a stinking, hotbed. All the animal creation vitiates the common air every time each one breathes the breath of life, or life-sustaining air, and were it not that all the vegetable kingdom depends on this vitiated air for part of their subsistence, and a great part, too, this would have been at an end as soon as animals covered the face of the earth. Therefore, and without the shadow of a doubt, plants are the best purifiers of all the agents that have yet been known to cleanse the air of a bed room, or any other room in a house, provided

always that such plants are not in bloom, or at least do not bear bloom with a strong scent."

WORKING GIRLS.

THE Pittsfield (Mass.) *Culturist* takes a practical and Yankee-like view of this very desirable "institution."

"Happy girls! who cannot love them? with cheeks like the rose, bright eyes, and elastic step, how cheerful they go to work.

"Our reputation for it, such girls will make excellent wives. Blessed, indeed, will those men be who secure such prizes. Contrast those who do nothing but sigh all day and live to follow the fashions; who never earn the bread they eat, or the shoes they wear; who are languid and lazy from one week's end to the other. Who but a simpleton and a popinjay would prefer one of the latter, if he were looking for a companion. Give us the working girls. They are worth their weight in gold. You never see them mincing along, or jumping a dozen feet to steer clear of a spider or fly; they have no affectation, or silly airs, or trying to show off to better advantage, and you feel as if you were talking to a human being, and not to a painted or fallen angel. If girls knew how sadly they miss it, while they endeavor to show off their delicate hands and unsoiled skins, and put on a thousand airs, they would give worlds for the situation of the working ladies who are so far above them in intelligence, in honor, in everything, as the heavens are above the earth. Be wise, then, you who have made fools of yourselves through life. Turn over a new leaf, and begin, though late, to live like human beings; as companions to immortal men, and not as playthings and dolls. In no other way can you be happy, and subserve the designs of your existence."

CORN CAKE.—A special premium was awarded to Mrs. Charles W. Wampole, at the late Fair of the Montgomery County Agricultural Society for a corn cake, made after the following recipe:

"Take the whites of 8 eggs; one-fourth pound each of corn starch, flour and butter; half pound sugar; one teaspoonful of cream of tartar; half teaspoonful of soda. Flavor with almond to suit the taste."

Advertisements.

FRUITLAND NURSERY.

THE Subscriber offers for Fall and Winter Planting (1855-6) the following desirable articles:

APPLE, PEAR, PEACH, APRICOT, NECTARINE, PLUM AND CHERRY TREES, a limited number of rare and superior sorts mostly propagated by himself and worked on Southern seedling stocks. *Prices*—Apple and Peach trees, 25 cents each; Apricot, Nectarine, Pear, Plum and Cherry trees, 50 cents.

FIGS—Four or five choice varieties, including the *Celestial*, *Alcant*, *Black Genoa*, &c., &c., 50 cents each.

GRAPES—The genuine *Catawba*, from the Ohio vineyards; also Weller's *Sourperrinon*, &c. 50 cents each.

QUINCES—The Orange variety, well rooted and strong plants, at 25 cents.

STRAWBERRIES—More than thirty varieties, including all the most desirable. (See separate advertisement of select sorts, in present number.) *Prices*, from \$1 to \$3 per hundred.

BLACKBERRIES—The genuine *New Rochelle* or "Seacor's Mammoth."—Berries of extra size and flavor. Well rooted plants at 50 cents each.

POMEGRANATES—The sub-acid, or sweet variety, at 25 and 50 cents each, according to size.

OSAGE ORANGE PLANTS FOR HEDGING—A large quantity of vigorous plants, of 1 and 2 years growth, at \$5 to \$8 per thousand.


OSIER OR BASKET WILLOW—Cuttings of the famous *Reverdi* at \$10 per thousand, or \$2 per single hundred. Also, the *Viminalis*, at \$5 per thousand, or \$1 per hundred.

Orders will also be received for choice **ROSES**, **ORNAMENTAL SHRUBS** and **TREES**, **EVERGREENS**, **VINES**, **GREENHOUSE PLANTS**, &c., &c. Address: D REDMOND, Augusta, Ga.

Sept 55—tr

FRUIT AND ORNAMENTAL TREES.

(AUTUMN OF 1855.)

 OUR new wholesale Catalogue or Trade List for the Autumn of 1855 is ready and will be sent gratis to all who enclose a stamp. The stock now on the ground is of the finest description, and by far the largest that has ever been offered in this country.

Nurserymen, Dealers and Planters can be supplied on very advantageous terms, and they will find it to their interest to consult our List and examine stock before purchasing. Our arrangements for packing and shipping are so complete that we can forward packages to the most remote parts of the United States with safety.

Any of the following Catalogues will be sent to all who apply and enclose a stamp for each:

No. 1—A Descriptive Catalogue of Fruits. No. 2—A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c. No. 3—A Catalogue of Dahlias, Verbenas, Petunias, and select new Greenhouse and Bedding Plants, published every spring. No. 4—A Wholesale Price Catalogue for Nurserymen and Dealers. No. 5—A Supplemental Catalogue of Fruits—containing prices of Fruit Trees for 1854 and 1855, and List of new varieties. ELWANGER & BARRY, Mount Hope Nurseries, Rochester, N. Y. Sep55—2t


TO MEN OF TASTE AND CAPITAL.

THE Subscriber, wishing to remove to Southwest Georgia, proposes to sell his place near Cave Spring, in Vann's Valley, Floyd County, Ga., containing 317 acres, more or less, returned 1st quality Oak and Hickory, mostly of soil, and surface not subject to wash. Some 160 acres are under good tillage, the remainder generally well timbered. It has several springs of cool, blue limestone water; two constant streams; an effective water power, without hurtful damming; orchards of many rare selected varieties, especially of Apples, and a large and commodious brick Dwelling, surrounded by fine scenery, and within a mile of the village long noted for its moral and educational advantages. All who have examined the premises concur in the opinion that this place combines the elements of Beauty, Fertility, Convenience and Healthfulness to an extent seldom, if ever, equaled in this country. But come and see for yourselves, and the character, location and resources of the place can hardly fail to satisfy you that it is a No. 1 article, not subject to the fluctuations of the market. For terms, apply on the premises. W. D. C. WRIGHT, Cave Spring, July 10, 1855. Sep55—1t*

FRESH IMPORTED TURNIP SEED.

I HAVE just received a large lot of fresh imported English TURNIP SEED, to which I call the attention of all Planters and Gardeners South. Among the assortment are Large Flat Dutch, Large Globe, Large Norfolk, Red Top and Hanover. For sale, in quantities to suit purchasers, at only \$1 per pound. Orders from the country solicited. Sep55—2t WM. HAINES, Broad-st., Augusta, Ga.

SHEPHERD'S DOGS, SHEEP, PIGS, &c.

 FOR sale, a very superior and well trained English SHEPHERD'S DOG, imported by the subscriber last season. Also, a fine lot of COTSWOLD SHEEP, Buck Lambs, and PUFFLE PIGS. Address JOHN GILES, South Woodstock, Conn. Sep55—3t

1855! GLOAMING NURSERY. 1855!

THE Subscriber having added many additional varieties of Southern Seedling FRUIT TREES to his former stock, comprising some fifty varieties of Apples, one hundred of Pears, twenty of Cherries, twenty of Peaches, Nectarines, &c., and being re-assured of their superiority over those raised in Northern Nurseries with confidence, founded on experience, again offers them to the attention of Southern Farmers, Planters and Pomologists at such prices as, he hopes, will leave no excuse for continuing to import them. Our trees are all grafted on seedling stocks two years old before grafting, consequently have good roots.

R. K. LAUGHLIN, Esq., 148 Carondelet street, New Orleans, is our Agent for Mississippi, Louisiana, and Southern Alabama.

* Catalogues for 1855 sent (gratis) to all applicants. J. VAN BUREN, Clarksville, Habersham Co., Ga. Aug55—4t

CARMICHAEL & BEAN,

DEALERS in HARDWARE, CUTLERY and AGRICULTURAL IMPLEMENTS, Augusta, Ga.

We are, also, Agents for the following articles:—SALAMANDER SAFES, made by Stearns & Marvin, New York; LITTLE GIANT CORN AND COB MILLS; Indian Rubber BELTING, PACKING and HOSE, made by Boston Belting Company; ATKINS' SELF RAKING REAPER; CIRCULAR SAWS, made by Ho & Co., and Welch & Griffith's HORSE POWERS; FAN MILLS, THRESHERS and SMUT MACHINES. CARMICHAEL & BEAN, Augusta, Ga. April55—Cly

F. MCCREERY, Charleston.

R. M. HOOKE, Chattanooga.

MCCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market. Feb55—Cly

TO THE PLANTERS OF THE SOUTH.

THE Belleville Manufacturing Company would call your attention to the different styles of GEORGIA PLAINS, which they are now manufacturing for the coming season, believing they are better adapted to the wants of the South than any negro cloths manufactured at any point north of the Potomac. They have been successfully supplying the orders of Planters in the interior and on the seaboard for a number of years, and have given satisfaction in every respect, so much so that none who have used them one season have failed to order them afterwards; and the name has been considered so fair a guaranty of their quality that in many cases, the Northern Manufacturers have endeavored to imitate and pass off their fabrics as the genuine *Georgia's Plains*. Having increased the capacity to produce these goods, we, therefore, desire to deal directly with the Planters, so they may get the genuine article for their negroes, which, for warmth and wear, will save them more than its cost in Doctor's Bills.

We are now making three styles, to wit:—The Heavy White Twills at 49 cents per yard; the Heavy White Plains, 32 cents per yard; the Brown A Plains, 21 cents per yard.

The goods delivered at the Agency in Augusta, Ga., and forwarded free of charge for forwarding and to be settled for on receipt of the goods, by orders on any responsible Factor or Commission Merchant, payable on the 1st February next. All orders will be put up in quantities as directed, in a bale or bales, and can be shipped from Augusta to any point South or West at as low a rate of freight as from any point. Planters who have no regular Factor, can give a reference, either in Augusta, Charleston, Savannah, Mobile, Montgomery or New Orleans or in such place as they are known, and if satisfactory, the order will be entered at once and the goods put up and forwarded as early a date thereafter as possible.

The highest market price will be given for WOOL, delivered in Augusta, in exchange for cloth. Address

GEORGE SCOTLEY, President, or, S. H. OLIVER, Agent Belleville Factory, Augusta, Ga.

Jul 55—4t

IMPORTANT TO PLANTERS.

THE Richmond Factory (Richmond county, Ga.) continues to manufacture WOOLEN CLOTH, for Negro Clothing, at 12½ cents per yard—finishing every material except the wool.

Those wishing to avail themselves of this opportunity to procure for their Negroes a superior article of Winter Clothing, have only to wash the wool clean in cold water, and send it to the factory, or to Messrs. SCRANTON, EXMOUR & Co., in Augusta, with instructions as to the amount of Cloth they wish made—whether heavy or light. If the wool be dirty, half a cent per yard will be charged for washing it. Burrs are not objectionable, as a machine is provided for removing them.

Wool is also carded into Rolls, for those who make their Negro, or other Clothing at home.

The terms now offered are so reasonable as to warrant a continuance of the liberal patronage heretofore extended by the planting community.

The Wools should be sent as soon after shearing as convenient, with the name of the owner distinctly marked on the bag or bale, that all the patrons of the establishment may be accommodated in due time.

Wool sent by any of the lines of Railroad, in Georgia, or South Carolina, or by steamboat on the River, directed to "Richmond Factory care of SCRANTON, EXMOUR & Co.," will meet due attention, and the Planter will always have his own wool manufactured into Cloth and returned to him.

The highest cash prices will be paid for WOOL. June55—4t WILLIAM SCOTLEY, President R. Factory.


GREENE'S PURE WHITE WHEAT.

I HAVE a very superior kind of WHITE WHEAT that I will engage to those who may want to purchase for seed wheat of the next crop, to be delivered at the La Grange depot in good, strong sacks, containing not more than one bushel unless ordered, nor less than a half. Wheat with the name of the purchaser and place of delivery. This Wheat is of the very earliest and whitest kind. Sown any time in November, and cut by the 20th of May. It has been exhibited at four different Fairs, and have obtained a premium in every instance. I have already made many engagements for the next sowing at five dollars per bushel. No Delivery no pay. P. H. GREENE

La Grange, March 29th, 1855.

April 52—1t

PURE DEVON AND GRADE CALVES FOR SALE!

 ONE very beautiful thorough-bred NORTH DEVON HEIFER CALF, 5 months old—sire, "Keokuk," dam, "Lively Dame"—for pedigrees of which see September number (1853) *Southern Cultivator*.

Also, a number of grade or half blood heifer and bull CALVES, of 1854, various ages—all from good native cows, and sired by premium bull "Keokuk," purchased from the Messrs. WAINRIGHT by Judge WARREN. For particulars, &c., Address D. REDMOND, May55—1t Augusta, Ga.

WM. ALSTON GOURDIN,

FACTOR AND COMMISSION MERCHANT,

CORNER East Bay Street and North Commercial Wharf, Charleston, S. C., is prepared to make liberal advances on consignments of COTTON, CORN, SUGAR, FLOUR, GRAIN, HAY, &c.

Genuine Peruvian Guano Depot!

FARMERS' PLASTER, CHARCOAL, BONE DUST, MINERAL PHOSPHATE LIME, SUPER PHOSPHATE LIME, &c. Always on hand. Sept. '54 1y

RANDALL'S COTTON PLANTER!

PALMYRA, Lee County, Ga.,
March 12th, 1855.

To Cotton Planters.

WE DARE to call your attention to a Machine which we have invented and patented for the PLANTING OF COTTON. Its superiority over all others used for a similar purpose, consists in its great simplicity, requiring no more experience for its use than for an ordinary plow; the cheapness of construction, the great saving of time and labor in the planting of the crop, but more especially in the cultivation of it.

The certificates which we herewith present to you are from some of the most respectable and intelligent planters in our country, who have thoroughly tested our Machines, and sustain us in the above statement of the advantages it possesses. We are confident that when presented to the Cotton Planters throughout the Southern States, it will, in a short time, be universally used by them for planting their crops.

In bringing these Machines before the public, we have taken every precaution to free them from the liabilities of being associated with the mass of patented inventions, which do not stand a practical test, and we can assure you who will try them that they will fully equal our representations.

The Machines may be had of the following manufacturers:—
THOMAS J. CHEELY, Augusta, Ga.; BROWN, CLEMENS & Co., Columbus, Ga.; J. H. WATSON, Lee Co., Ga.

WM. W. CHEEKE, Esq., Albany, Ga., is our only Agent, who will contract for us with parties wishing to manufacture the Machines in any part of the United States.

CHARLES RANDALL,
LEONIDAS B. MERCER.

RANDALL & MERCER.

Palmyra, Lee Co., Ga., Aug. 10, 1854.

GENTS:—Having planted your entire crops with our Cotton Drill, please give us your candid opinion of the Machines, and particulars as to the advantages to be derived from their use, and oblige.

Yours respectfully,
To Messrs. S. D. McLENDON, WM. H. OWENS, ROBT. LUNDY.

Palmyra, Lee Co., Ga., Aug. 12, 1854.

GENTS:—Your favor of August 1st, immediately to hand. In giving you our opinion of your Drills, in the first place, we would say, we are pleased in every particular with their operation, and as to the advantages to be derived from their use:—the first is the saving of at least one hundred and fifty bushels of Cotton Seed, in planting one hundred acres; second, a saving of labor in planting, of one horse and hand, planting from eight to nine acres per day, the Machine opening the furrow, dropping the seed and covering as it moves over the ground; third, a more perfect stand may be obtained with your Drill than by planting in the common way; fourth, a saving of at least one-third in the labor of chopping out; fifth, the seed being put in a line not one-half an inch in width, the chopping out can be deferred, until the season for hoe is passed, without injury to the growth of the Cotton; and being in this narrow line with a sweep or narrow rooter, you can side so close as to cover up the first crop of grass in the Drill without injuring the stand of Cotton in the least. By this close sowing nearly all hoe work may be dispensed with, after chopping out. These we consider the principal advantages to be derived from the use of your Drills. On a retrospect of our last year's experience we have no hesitation in saying that any person with your Drills, can cultivate at least twenty-five per cent more Cotton to each hand, with the same labor than can be cultivated in the common way of planting. We put that at a low figure so that no one can say they have been deceived by us. In the hope that these Machines may come into general use, we subscribe ourselves,

Yours very truly,
S. D. McLENDON,
WM. H. OWENS,
ROBT. LUNDY.

Albany, Dougherty Co., Geo. Aug. 16th, 1854.

GENTS:—Yours of August 4th, with enclosed is before us. In reply we would state that we believe any person using your Cotton Seed Drill will realise every advantage Messrs. McLENDON, OWENS & LUNDY speak of; and we fully coincide with them in their high appreciation of your invention.

Yours respectfully,
J. H. WATSON, Lee Co.
DAVIS PACE, Dougherty Co.
WM. B. McLENDON, Randolph Co.
B. B. DANIELS, Lee Co.
Y. G. RUST, Dougherty Co.
JAMES CHEEK, Lee Co.
JEREMIAH HILLMAN, Lee Co.

To Messrs. RANDALL & MERCER.

Palmyra, Lee Co., Aug. 10, 1854.

Messrs. RANDALL & MERCER:—In reply to yours of the 5th inst. in regard to the operation of your Cotton Seed Drill, I am happy to say that after planting a portion of my crop in the old way, I was enabled to obtain one of your Drills, with which I finished. It is what we have long wanted, and the beautiful work it performs has perhaps been attempted in a thousand different ways by intelligent planters, but with only partial success; yours leaves nothing to be desired; it deposits the seed uniformly, and constantly on a line of one to two seeds in width; saves about one-half of the labor in planting, and one-third of the hoe labor in cultivating. All must use this drill in self defence; I shall, for one.

More cotton may be planted and cultivated, and if not the labor saved, may be turned into other channels. Yours respectfully,

April—
J. L. MERCER.

**THE SOUTHERN NURSERIES,**

WASHINGTON, ADAMS CO. MISS.,
are now well stocked with all the varieties best adapted to the South, of FRUIT TREES and SHRUBS, VINES, STRAWBERRY PLANTS, &c.; and of ROSES and other ORNAMENTAL SHRUBS and TREES, EVERGREENS, &c., all of southern growth, and of good size. The packing is so carefully attended to, that Trees and Plants, Roses, cuttings for hedge, &c., are sent to all parts of the South, with scarcely a chance of their being injured.

Catalogues will be sent on application.

Nov—5.

THOMAS AFFLECK.

AFFLECK'S**SOUTHERN RURAL ALMANAC.**

A handsome little volume, full of useful and interesting hints on RURAL AFFAIRS IN THE SOUTH. WILL BE ISSUED AS USUAL ABOUT THE FIRST OF NOVEMBER. Price 10 cents.

AFFLECK'S COTTON PLANTATION RECORD AND ACCOUNT BOOK—New Edition, now ready—No. 1, for forty hands or less, \$2 50. No. 2, for eighty hands or less, \$3 00. No. 3, for one hundred and twenty hands or less, \$3 50.

AFFLECK'S SUGAR PLANTATION RECORD AND ACCOUNT BOOKS—No. 1, for 50 hands or less, \$3 00. No. 2, for 120 hands or less, \$3 50.

These Books are now in general use amongst Planters. They will be sent by mail, prepaid and carefully enveloped at the above prices, and when five copies are ordered by clubs, and remitted for, an additional copy will be sent as commission to the individual making up the Club. Orders solicited from Booksellers and other dealers, to whom a liberal discount will be made.

B. M. NORMAN, Publisher,
14 Camp street, New Orleans.

Nov—17

CHEEROZE!**A VALUABLE LOT OF LAND FOR SALE.**

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

*For terms, &c., apply to the subscriber, or to Col. J. W. M. BERRIEN, of Rome, Ga., who will take pleasure in pointing out the land.

September—17

D. REDMOND,
Augusta, Ga.

EXTENSIVE COLLECTION OF SELECTED ROSES AND SOUTHERN RAISED FRUIT TREES.**AUGUSTA NURSERY.**

F. A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camellia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE.

Nov—17

Augusta, Ga.

P. D. GATES,

COMMISSION MERCHANT,

AND Dealer in AGRICULTURAL IMPLEMENTS and MACHINERY, No. 12 Broadway, New York.

Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Power and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines.

June 5—City*

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PREMIUM STRAWBERRY PLANTS!

THE Subscriber will furnish, at any time after the first of October, a limited number of the following desirable varieties of STRAWBERRY PLANTS, at the prices annexed:

<i>Pistillates.</i>	<i>Per Hundred.</i>	<i>Sambines and Hermaphrodites.</i>	<i>Per Hundred.</i>
Hovey's Seedling.....	\$2	Early Scarlet.....	\$2
McAvoy's Superior.....	3	Longworth's Prolific.....	8
McAvoy's Extra Red.....	3	Walker's Seedling.....	8
Crimson Cone.....	3	Boston Pine.....	8
Black Prince.....	3	Genesee Seedling.....	2
Crescent Seedling.....	3	Iowa.....	1
		Orange Prolific.....	1

A deduction of 30 per cent. when 500 or more plants are ordered at one time. All plants carefully packed, and sent in good order to any part of the South. Orders, accompanied with the money, promptly attended to. Address

Aug55—tf D. REDMOND, Augusta, Ga.

TO THE FARMERS AND PLANTERS OF THE SOUTH

THE undersigned have received the exclusive Agency for the entire South and Southwest for the very best CORN and COB CRUSHERS now in use, and the only articles of the kind that will make fine meal, suitable for the table—these they are guaranteed to do. These Mills will effect a saving of 23 per cent., or fully one-third, in crushing the food prepared for stock, as has been satisfactorily tested. Price from \$50 to \$75. Every Farmer and Planter in the land should have them.

Manufactured and for sale by W. S. HENRY & Co., Meeting street near Line street, Charleston, S. C.; McCREERY & HOOKE, Brown's Wharf, Charleston, S. C., and J. A. ANSLEY, Commission Merchant, Broad street, Augusta, Ga.

Aug55—5t

LANGLEY & CO., General Agents,
 Charleston, S. C., and Nashville, Tenn.

1855! 1855!

SOUTHERN CULTIVATOR,

A MONTHLY JOURNAL,

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE

Horticulture, Stock Breeding, Poultry, Bees, General Farm
 Economy, &c., &c.

Illustrated with Numerous Elegant Engravings.

ONE DOLLAR A YEAR IN ADVANCE.

DANIEL LEE, M. D., and D. REDMOND, Editors.

The Thirteenth Volume will commence in
 January, 1855.

THE CULTIVATOR is a large octavo of Thirty-two pages, forming a volume of 334 pages in the year. It contains a much greater amount of reading matter than any Agricultural journal in the South—embracing, in addition to all the current agricultural topics of the day,

Valuable Original Contributions

from many of the most intelligent and practical Planters, Farmers, and Horticulturists in every section of the South and Southwest.

TERMS:

ONE COPY, one year.....\$1 | TWENTY-FIVE COPIES, one year.....\$20
 SIX COPIES " ".....5 | ONE HUNDRED " ".....75

THE CASH SYSTEM will be rigidly adhered to, and in no instance will the paper be sent unless the money accompanies the order. The Bills of all specie-paying Banks received at par. All money remitted by mail, postage paid, will be at the risk of the Publisher.

Advertisements

Inserted at ONE DOLLAR per square of twelve lines, each insertion; One square per annum TEN DOLLARS.

ADDRESS WILLIAM S. JONES, Augusta, Ga.

Persons who will act as Agents, and obtain Subscribers, will be furnished with the paper at club prices.

SOUTHERN CULTIVATOR FOR 1854.

BOUND volumes of the CULTIVATOR for 1854 may now be obtained at this office. Price, \$1.50. Or we will send it by mail, post-paid, at \$1.80. Address WM. S. JONES, Augusta, Ga.

AUGUSTA SEED STORE.

THE Subscriber has received his regular supply of Turnip and other SEED required for the season, which are fresh and genuine:

PURPLE TOP RUT BAGA TURNIP,
 LARGE ENGLISH NORFOLK TURNIP,
 LARGE WHITE GLOBE TURNIP,
 EARLY FLAT DUTCH TURNIP,
 RED TOP FLAT TURNIP, &c., &c.

July—8t

J. H. SERVICE.

MERINO RAMS FOR SALE.

THE Subscriber offers for Sale several full-blood MERINO RAMS. Having reduced the number of my flock, I have more rams than I need. They are from two of the best flocks in New York; and their fleeces, both in fineness and quantity, running from 9 to 14 lbs.

July—tf

J. B. JONES, Birdsville, Burke co., Ga.

RICH COTTON LANDS OR SALE!

THE Subscriber offers for sale Forty Thousand Acres of the most productive COTTON LAND, in the Southern country, situated in the counties of Lee, Dougherty and Baker, in bodies of five hundred and two thousand Acres each, a part of which is partially improved.

For certainty of crops and durability these Lands are unequalled in the Southern States. Similar lands contiguous in cultivation, are yielding an average of seven bales Cotton, per hand, for a series of years, and eighteen to twenty-five bushels Corn per acre.

Terms liberal. If desired, a credit of one to five years will be given. WM. W. CHEEVER.

Albany, Ga., March 15. 1855.

April—tf

RESCUE GRASS SEED.

A LIMITED quantity of this SEED (crop of 1855) for sale by D. B. PLUMB, & CO.,
 Aug55—tf Augusta, Ga.

SCOTT'S LITTLE GIANT CORN AND COB MILL.

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April55—Ct

SOUTHERN CULTIVATOR.



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DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

WHEAT CULTURE IN THE SOUTHERN STATES.

We rejoice to know that the cultivation of Wheat in the Southern States meets with such encouragement as is likely to make it a valuable staple in a new system of rotation of crops. It should be considered in connection with planting, with the natural and the cumulative wants of the soil, as well as the almost universal desire for Wheat bread. As an article of human food, in no part of the world have mankind voluntarily lessened their daily consumption of Wheat, because they preferred bread made of the meal of maize, rice, rye, barley, oats, or any other cereal. On the contrary, thousands of families in all the States, to say nothing of the daily bread of the masses in Europe, annually consume less meal and more Wheat flour, as their means enable them to consult their taste. On good Wheat land, one can raise a bushel of Wheat quite as cheaply, as one of corn; but such land is not common, and of course 100 pounds of flour cost more labor than a like quantity of meal, to most producers. If they had all the experience and skill in growing Wheat which they possess in the cultivation of corn, such an increase of knowledge would enable them to reduce the first cost of a bushel of Wheat nearly one half. This valuable knowledge will be acquired, sooner or later, for the increasing millions are sure to perpetuate an increasing market for this grain.

In Dr. SCHMITZ's translation of NINURTA's "Lectures on Ancient History," may be found the following remarks: (Vol. I, p. 16) "Man was first created at Babylon corn [wheat] there *grew wild*; and the new race of beings there found the first necessary food, especially Wheat. This tradition is the more remarkable because several naturalists have made the observation that corn [Wheat] does not grow wild in any part of the world. I do not know whether by a process of improvement our garden fruits can be derived from wild fruit; it is well known, however, that the noble Vine Grapes grow wild in Cochin. Whence, then, does Corn come? My opinion is that

God made direct provision for man; something was given to all, real Wheat to the Asiatics, and Maize to the Americans."

We cite the above, not so much to record in these pages the "opinion" of so ripe a scholar and so careful an observer as NINURTA, in reference to "the direct provision made for man" by his Creator, as to indicate the fact that the warm valley of the Euphrates, if not that of the Nile, is the earliest known habitat of the Plant under consideration. The fact that Egypt has been able to feed indefinite millions at home on Wheat, and export a large surplus for three thousand years, proves that our Southern climate should be at least as friendly to the cultivation and growth of this grain as any north of us, so far as temperature effects the crop. The uncertainty of getting timely rains is, probably, the most serious impediment and risk encountered by the Southern Wheat grower. He has not the waters of the Nile nor of the Euphrates to irrigate his land when it suffers from protracted dry weather. If a kind Providence sends him fruitful seasons he is grateful for the same; but when the "early and latter rain" fail, he has no remedy. There is, however, as good a chance for Wheat as for corn or cotton, and perhaps a better one than for either, as Wheat is ripe in May, and some months in advance of cotton and corn. Wheat is liable to injury by insects and parasitic plants; but not more so than corn and cotton.

Not to dwell on hazards and casualties which are too numerous and important not to be named, we remark that every one who sows wheat should see that the land is *well prepared for the seed*. Defective plowing will certainly tell against the harvest. The most common defects in plowing are:—1st, leaving a part of the soil unbroken; 2d, not stirring it to a sufficient depth, and 3d, not killing grass, weeds, bushes and other hostile plants which, growing, absorb much of the strength of the earth. Foul wheat fields are rarely, if ever, profitable. There are soils which it is unwise to plow deeply immediately before seeding, for the subsoil is naturally sour, or lifeless, and can only be ameliorated by many months exposure to the sun, rain, and gases, after they have been plowed. Liming generally hastens the improvement of such lands; but whether limed or not, they ought to be thoroughly pulverised to

the depth of several inches. A good seed-bed is not to be dispensed with by any who intend to deserve a fair crop; and what constitutes a good bed for wheat few cultivators need to be informed. In strong land, it should be mellowed by the implements of tillage at least eight inches; and twelve would be still better.

Next in importance to thorough cultivation is manuring. By the liberal use of manure, English farmers have raised the average yield of wheat, in the last thirty years, from 15 to nearly 30 bushels per acre. In the making of manure, a system of plant-rotation, including renovating crops, has many advantages. It develops all the latent elements of fertility by subjecting the soil to the recuperative powers; 1st, of all natural agencies; 2d, of the best culture, and 3d, of such plants as draw largely on the atmosphere or sub-soil, or both, for their nourishment.

Whatever manure one may have, either domestic or imported, should be thoroughly incorporated with the tilled earth before sowing. In this way, every root and rootlet of growing Wheat finds its appropriate food within its reach, and the young plants tiller and spread till the ground is fully covered, and bears its maximum of grain. Speaking of the best cultivated forty acres in Great Britain, the last number of the *London Agricultural Gazette* says that besides keeping forty-eight cows, that part of the farm cultivated in wheat yields "eighty-five bushels per Scotch acre." In the same leading article the editor makes the following pregnant suggestions:—"Fertility is, in fact, no mere function or quality of soil; it is capable of quantitative estimation, and is directly due to the quantity of fertilizing matter present."

Every lover of the soil should sow and plant with a clear appreciation of the things, and their whereabouts, which are to form his expected crop. If the land needs manure, cease not to study and labor to obtain a due quantity of this raw material for making grain. Two hundred pounds of Peruvian guano is a fair allowance per acre in this country; although three and four hundred are not unfrequently used in England.

It is important to cover seed wheat at a uniform depth, which cannot be done with a common harrow so well as with a wheat-drill, or the plow. In the Genesee country they use wheeled cultivators and gang-plows for putting in seed. For twenty years, the use of small plows for putting in wheat, in place of harrows, has been steadily on the increase. The ground is well harrowed before the seed is sown. Some sow on the furrows, after plowing; and by drawing the harrow across the furrows, the seed is mainly thrown and covered between them, and comes up in rows like drilled wheat. To enable the roots of young plants to take a firmer hold of earth, and prevent their drying in dry weather, it is wise to roll the ground immediately after seeding. It is apt to be too light and open, if not compressed by the roller.

Many valuable experiments have been tried to ascertain the right quantity of seed to put upon an acre. Planted in drills and hand-hoed like corn, six to eight pints of wheat to the acre have given the best returns. A gallon of good seed, properly distributed will make plants enough for an acre; but as there is some difficulty in this, from

4 to 8 gallons are the safer quantity to put on an acre. Mr. Meech, of England, uses a bushel, or eight gallons; another cultivator claims that his crop will exceed all others when harvested, with only six pints of seed per acre. Hitherto, English farmers have been famous for the vast amount of seed sown upon a given area; some applying five and six bushels of oats and barley, and three or four of wheat per acre. During the reaction, it is natural that many should go into the opposite extreme.

To prevent smut, all seed should be steeped three or four hours, and not longer, in a brine made of common salt, or in copperas water, or a solution of blue-stone, (sulphate of copper). By keeping seed too long in these powerful salts, we have seen the germs of wheat killed, to the serious injury of the crop.

We think quite as good results are attained by washing seed in a solution of common salt as in blue vitriol, or green vitriol. Either will destroy the living principle in all parasitic plants that infest the seeds of cereals.

In selecting seed, the writer may remark that he has grown over fifty varieties of wheat, and regards the "improved white flint" as the best, all things considered. That advertised in this and former numbers of the *Cultivator* by Mr. P. H. GREENE, of La Grange, Ga., appears, from a sample sent to us, to be an acclimated variety of the white flint, and doubtless deserves the commendations which it has received at several agricultural fairs. It is well to change one's seed occasionally; i. e., procure wheat grown on a different, and if possible, a better soil. All things having life are endowed with certain constitutional powers, which are subject to deterioration, and may be weak or strong; healthy or unhealthy, according to the circumstances with which they are surrounded. Where one has both the best of wheat-land and the best of seed, he can gain nothing by changing either. Few, however, are so well off; and all should try to improve their system of tillage and husbandry. A pea crop plowed in, will generally aid in giving a better crop of wheat. Wood ashes spread over the ground in any quantity from 25 to 100 bushels per acre are valuable to strengthen the soil.

SEA ISLAND COTTON—ITS CULTURE AND MANAGEMENT.

EDITORS SOUTHERN CULTIVATOR—I give you such information in reply to the request of your correspondent Mr. P. W. BROWN, of Texas, as I can; but if, as is very probable, you get better from any other source, you need not publish mine. As I suppose that Mr. BROWN's Sea Island Cotton is not of the extra fine quality, the McCARTHY's Gin is decidedly the very best and most economical one for his purposes. This Gin is used by many, if not most, of the producers of the very finest Long Cotton; but it is generally believed to injure the quality of such cotton; yet that it is the best Gin for the preparation of the common and middling qualities of Long Cottons, seems now to be acknowledged as a fixed fact. It is made only in Charleston, and sold by WM. M. LAWTON & Co., Agents for the patentee. The price is \$125 per Gin, in Charleston. It will gin from 150 to 600 pounds per day, according to the speed and regularity with which it is driven and fed; but when ginning more than 200 pounds per day is supposed to injure the staple. Each gin is light work for one small horse or mule. The same power or machinery that will drive a Saw Gin will drive this Gin.

As I do not suppose that Mr. Brown would be willing or able to take as much pains with his cotton as we do

with our fine cottons, I will mention only such parts of our system as would be likely to suit him. As to the cultivation of Long Cotton, it differs little if anything from that of Short Staple necessarily, though we do cultivate very differently and much more expensively. As soon as our cotton begins to open we put out a few hands, generally elderly women and children, to pick it, getting from 10 to 20 pounds per hand daily, and as it opens more freely more hands are added, until all hands are employed, and we continue to pick as long as we can get 15 to 20 pounds per hand a day, stopping occasionally to gather other crops when compelled. My highest pickings seldom exceed 80 pounds, and that only to the best pickers. The cotton that is picked one day is left in the sheets until early next morning, when it is spread out on a large board scaffold (or floor exposed all day to the sun) and looked over, each sheet by its picker, until about 7 or 8 o'clock, or until the dew has dried off the cotton in the field, when the pickers leave the cotton spread out on the scaffold in the care of a weakly, but trusty hand, and go to picking again. The cotton on the scaffold is turned over occasionally through the day and put up at sunset or when ever any shower of rain comes on. When taken from the scaffold it is thrown open into some room until properly cured, which is known by the seed cracking under pressure. It is then carefully packed away in bulk, in some close room. The hands are directed to pick the cotton out of the fields free from leaves, dirt, &c., and as each picking bag is emptied into the sheet, the cotton is looked over and all motes, leaves and dirt picked out; then it is spread out in the sheet in the sun until they stop in the afternoon at sunset. Before ginning, the cotton from the bulk is looked over and all leaves, stained or imperfect cotton, or other trash, is picked out. The task for this varies from 50 to 300 pounds of cotton to each hand, according as it is desired to do the work nicely or not. The finer the staple, the more troublesome and important this first cleaning, for unless this is done properly, the cotton can never again be properly cleaned without much extra time and labor. It is then ginned, and if it is desired to put it up clean, it is next moted—the task varying from 25 of fine cotton to 100 or 150 pounds of commoner quality per day. This moting is done only by the most careful woman, and fine cotton is again overhauled by two or three of the most careful moters before it goes to the bag, which must be round, otherwise, owing to the prejudices of the buyers, it will not sell for anything near its value. Long Cotton is never packed in square bales, though we planters believe that pressing must injure the staple less than the pestle; but in this we have to yield to the prejudices of the buyers.

Some of my neighbors, who cultivate the common Sea Island Cotton, after picking it with some little care, pass it through the whipper, when they have one, which whips out the dust and some of the leaves, &c., sometimes having one woman or two behind the whipper to pick out yellow and rotten leaves, &c., as well as they can, after which it is passed through the McCARTHY Gin, packed and sent to market. Of course, such cottons have proved hard to sell, and have brought comparatively much lower prices than cottons that were finer and better prepared. Planters producing such cottons have to contend with a powerful competition from Florida, where it can be produced much more abundantly and cheaply than with us. As Long Cotton is purely an article of luxury, the price of it varies from year to year, and frequently does not depend merely upon the quality produced. I have sold the same quality of cotton at seventeen cents and again at fifty-one cents. A prophet, who could foretell anything about the future of Long Staple Cotton, has not yet risen that we have heard of, in this region, therefore, nothing can be said with any certainty, but as the section of country suited to the production of this staple is very limited, the pro-

duction cannot be materially increased while its consumption must gradually increase as its value becomes known. Small steam engines are being used about here for ginning cotton and with so much satisfaction by those who have tried them that the number of engines is being increased every year. They have proved much cheaper and more reliable than mule power for this purpose. Engines of 3, 5, 8 and 12 horse power are very substantially made, with strong wheels, axles and tongue for moving them, by Mr. WM. LEBBY, of Charleston, at such reasonable prices that they are the ones most used. Others of cheaper and slighter construction, but still well adapted to plantations, are made at the North, delivered in New York City at about \$80 to \$90 per horse power, also portable. Messrs DEVEAUX & HEYWARD, of Charleston, will order the latter.

Yours respectfully,

R. C.

Beaufort, S. C., Sept., 1855.

METEOROLOGY FOR FARMERS—LIEUT. MAURY'S LETTER.

EDITORS SOUTHERN CULTIVATOR—In a recent number of the *American Farmer*, Lieut. M. F. MAURY, U. S. N., makes a proposition to the Farmers of America, having in view Meteorological Statistics and Charts for the land, on a plan similar to those gotten up by him for the sea. The value of such statistics in an agricultural and sanitary point of view must be evident to all. I quote some suggestions from a letter recently received from Lieut. MAURY, hoping to elicit an interest in this project on the part of the Executive Committee of our State Agricultural Society, and Agriculturists generally.

"I am glad to find in you such a hearty second to my proposition. The matter is now fairly before the farmers and it is for them to say whether or no I shall have the help needful to enable me to carry it out. There are hundreds, I might say thousands of public-spirited citizens like yourself in all parts of the country who are ready to lend me aid by their co-operation as fellow-laborers and observers. But what can I do with their observations, unless government will order them to be discussed and authorize their publication? I might put them away in the pigeon holes of my desk, but I apprehend that they would do very little there towards the advancement either of agricultural or sanitary Meteorology. Meteorological observations are of very little use in pigeon holes, indeed they are as useless as the old log-books and sea-journals were in old sea-chests and garrets, until I was authorized to ask for them, discuss them and publish the results, then it was found that they contained information that enabled us, in one sense, to compress the world and put it into a smaller compass for the business of trade, and enable vessels to accomplish, almost in weeks, voyages that it formerly took them months to perform.

"The improvement in the ways and channels of communication that have taken place by land and sea, even in our life-time, have so diminished, in one sense, the size of this globe of ours, that one may now 'put a girdle round about the earth' in less than half the time it could be done when we were boys. When the battle of Navarino was fought, it took the news (and it was brought by the swiftest messengers of the day) 90 days to reach the United States. Now, there is no market-place or fortress any where on the sea shores of this wide world that is so far off but what news can reach us from it in less than 90 days. Vessels taking advantage of the increase of knowledge concerning the 'winds and currents of the sea,' and trusting to their canvass alone, are now continually in the habit of making a voyage to the antipodes and of completing the run from the farthest port in Australia to

Europe or the United States in less than 90 days; indeed some of the long-legged, swift-footed clippers have nearly performed voyages of circumnavigation in but little over half that time.

"Thus while winds and storms have enabled traders to fetch and carry in half the time or less, they did before and so reduced the compass of the world to half its former dimensions in time, they have on the other hand brought markets that were before completely inaccessible and placed them within easy reach of the producer, and so enlarged the world by increasing its capacities to sustain population. The opening of new markets or making old ones more accessible is a great thing for the farmer. I had the pleasure, not long since, of meeting with one who was so situated moreover, that while he enjoyed these advantages he could appreciate for himself and his neighbors the benefits arising from them. Tobacco had been the staple of his part of the country, but with these new market facilities he and his neighbors, he told me, had gone largely into breadstuffs also.

"Do you grow less Tobacco than formerly?" I asked.

"No," was the reply.

"Whence come the labor for producing the breadstuffs—do you import it?"

"No"—our laboring force is the same, and we get it for the breadstuff, simply by giving another turn to the screw.

"Thus, you observe, that these improvements in commerce and navigation have a stimulating effect upon production and help the farmer to make 'two blades of grass to grow where but one stood before.' It appears, therefore, that farmers as well as merchants and sailors have been benefited by the 'wind and current charts,' and the improvements to which they have led. It would seem, then, that they have a great interest in the Meteorology of the sea. Now, if their interest in Marine Meteorology be so considerable, how much more so must it not be in Agricultural and sanitary Meteorology? Why will not the farmers, therefore, ask that the government will authorize me to do as much for the Meteorology of the land as I have been permitted to do for that of the sea?"

"And this, my dear sir, brings me exactly to the point where you and all other farmers may help out this good cause. Will not the farmers and planters of Georgia, as well as those of every other State, ask their Representatives in Congress simply to extend that degree of encouragement to Agricultural Meteorology that has been so cheerfully, and may I not say beneficially, extended to Sea Meteorology? By so doing, you and they might enable me to accept your kind offer to co-operate and observe gratuitously."

"N.B.—Will not your State Agricultural Society take action in the premises, and commend the policy, by resolution, to the favorable consideration of your Representatives in Congress? Such action on the part of the Society of every State would procure for the plan, certainly, a trial." R. B.

Rome, Ga., 1855.

PLANTATION AND FARM GATE.

EDITORS SOUTHERN CULTIVATOR—I herewith send you a rough draught of my farm gate, with the latch, described in your September number, attached. The upright lever, which may be used or not, is useful enough to open your gate when you are on horseback. I use scantling 3 by 4 and 5 by 5½ in length—the slats are 1 by 4 wide and 10 feet long—7 slats with one good brace is all-sufficient for an excellent gate. A stout wrought iron nail, made in the shop, should be driven through the slats and brace, and well clinched, as represented in the cut; but if pins are used, let them be made with a head, and securely wedged on the opposite side, for which purpose they

should be allowed to come through some half inch. Let the slats be pinned through the scantling also. For these gates any kind of hinge will answer, but I prefer one made of 1¼ by ¾ iron, and fitted astride of the back scantling, and secured in its place with two wrought rails on either side. For the top hinge, I use a square large enough to slip over the scantling, letting it rest on the top slat, and secure it with one nail, on either side.

It will be seen that these gates may be made without using a single nail, still I would give preference to the nails, for the reason that they require no wedging. I have two or three made without nails, which have been swinging in their places for the last six years, and no sign yet of any disposition to sag. If preferred, a twelve inch at the bottom, with two tenons on each end may be used, but with this five slats will be enough.

Respectfully, J. M. HATCHER.

REMARKS.—We were not able to have the drawing sent us engraved for present number, but any information needed may be obtained by addressing Mr. HATCHER, at Saw Dust, Columbia County, Georgia.—EDS.

BARLEY—RESCUE GRASS—GRAPES, &c.

EDITORS SOUTHERN CULTIVATOR—Will you or some of your subscribers give me some information concerning Barley? Is it equal or superior to rye or wheat as cured fodder? Does it bloom as early as either? Does it require strong land, dry or moist? Which is the best time to sow it? and, finally, where can good seed be obtained? and what quantity is commonly sown to the acre? The beard of the rye will sometimes effect or even kill mules, when fed much on it, and for that reason I would like to substitute another grain. Oats are too uncertain.

While on the subject of grain, will you allow me to say a word concerning the Rescue Grass. About the year 1841 or '42, I do not remember which, a friend of mine, formerly of St. Thomas Parish, Charleston District, returned from Texas, his now home, on a visit to his family; he distributed among his friends seeds of a grass which he called "Texas Oats." I came in for a small share, through a mutual friend. I sowed it very carefully in a well prepared spot in a flower garden. It yielded very heavy grain, but I did not like it on account of its being so very short, scarcely a foot high. I have tried it in other places with no better result. It still comes up yearly in my flower garden, where I allow it to remain for the verdure it gives us during winter. Frost has no effect upon it. It comes up in November and December, remains very small until the early spring, shoots up for seed at the same time as Rye, and dies in June. I have called it by the name of Texas Oats, until last spring, when a friend and neighbor of mine asked me to look at his patch of the celebrated Rescue Grass. To my surprise I recognized the identical Texas Oats I had had in my garden for twelve or fourteen years, not higher and no more valuable than mine.

This grass may do better elsewhere, but I fear Mr. IVERSON will have to yield, "Rescue or no Rescue."

The Grapes in our vineyards are ripening fast. The rot has disappeared. It has, this season, only affected the Isabella. The others are splendid. A. C.

"Montmorencie," S. C., Aug., 1855.

TO CURE BROKEN HORNS.—Remove the mutilated horn, and bind the stump with a cloth well tarred or pitched; any fabric will do to bind with, if the wounded part be first well covered with warm pitch.

* See article on Rye and Barley in present number.—EDS.

WORKS IN HORSES—A CERTAIN REMEDY.

EDITORS SOUTHERN CULTIVATOR—In the the July number of the *Cultivator*, "Cupio" desires a remedy for worms in horses, and I will give him one which I think is certain in its results.

About two years ago, I incidentally came across a Medical journal, published in the West, in which was a communication from a physician, stating that previous to starting on a trip of twenty miles, he noticed his horse eating the young shoots of the China Tree, after driving about ten miles, his horse commenced dunging frequently and at each time passed a large number of worms and bots. In a few days the horse commenced mending in flesh, and his hair became slick and glossy. He then tried the same remedy on another horse with the same result.

Knowing that the China Tree root and berries are good anthelmintics, I was induced to converse with a number of farmers on the subject. One remarked, "my mother kept a number of horses on the plantation, and now I can understand why it was that her horses were healthy and she seldom lost any by disease, while our neighbors had sickly horses and often lost them. I frequently noticed our horses eating the China berries, as there was a number of the trees growing in the horse lot." Another one stated, "I save, each year, China berries, and keep some always in my feed trough and my horses are not troubled with worms."

Such is the concurrent testimony of a number of others respecting the use of the China Tree, for the purpose of expelling worms from horses. I intend to plant the trees in my horse lot.

Respectfully,

ZELOTES H. MASON, M.D.

Dahlonaga, Ga., August, 1855.

BLIND STAGGERS IN HORSES—CORRECTION.

EDITORS SOUTHERN CULTIVATOR—In your August number, under the caption of "Blind Stagers in Horses—a cure," I notice several typographical errors. One, perhaps, should be corrected, as I would have my informant correctly reported, though the result might not be difficult. In the part alluded to, instead of "well heated" with an equal portion of common salt, it should read, "well beaten," &c. I am aware that I write a hand very difficult to read, and am pleased that your compositor, in the letter I have written for your paper, has been so correct.

Respectfully,

H. J. A.

Toulon, August, 1855.

CROPS IN ALABAMA—HEDGES—OSAGE ORANGE, CHEROKEE ROSE, CRATAEGUS PYRACANTHA, &c.

EDITORS SOUTHERN CULTIVATOR—Our prospects for crops of both cotton and corn, are now promising—the corn crop is now safe beyond contingencies, and will be the best ever made in this section. I mean by this that there is more than the usual quantity of land planted in corn, and it is good on every variety of soil. Much of the cotton did not come up before the middle of May, but that which did come up early is looking unusually well, while the late crop is now beginning to grow off.

I am astonished that one of your taste in rural matters should prefer the Osage Orange to all other plants for a hedge. For my part I much prefer the Cherokee Rose to the Osage Orange. I have seen hedges 12 feet high of the latter in Texas, growing in the wild unpruned state, and they present an uncouth, jagged, naked appearance, not at all "a thing of beauty," though a very effective barrier to any kind of predators. But so is the Cherokee Rose formidable to stock, while with its evergreen leaves and flowers of snow, it is gloriously beautiful. Unfortun-

ately it has never received the care, as it needs little, which is bestowed on other hedges. I have the *Crataegus Pyracantha*, growing finely, five years old last spring, and it is a very perfect hedge in every sense of the word, and is strong and tough, protected with thorns, which renders it an object of terror to little darkies. Its delicate white flowers in spring and scarlet berries in autumn and green leaves in winter, render it always attractive, while it is the receptacle of all the eggs on the plantation—the Turkeys, Guineas and Shanghais, all resorting to it. I have about 400 yards of this hedge and will recommend it as a good hedge for any enclosure, plantation or garden. I can gather several bushels of seed in a short time, and if any of your subscribers wish to experiment with it I will send a few of the seed to any one who will subscribe to the *Cotton Planter* published at Montgomery by BRITAIN & BLUE, or who will procure a new subscriber to the *Southern Cultivator*.

Truly yours,

JENKINS.

Montgomery, Ala., July, 1855.

REMARKS.—We have heard very favorable accounts of Cherokee Rose Hedges in Alabama and Mississippi, on rich prairie soils, where they were allowed to spread several yards in width, and as many high; but we never saw a hedge of that plant that came up to our notion of what a defensive and ornamental hedge should be. The straggling, trailing growth of the Cherokee Rose seems to us a radical defect, so far as fitness for a hedge is concerned. *The plants are not strong enough to bear their own weight*, and hence it is impossible to keep it in trim shape and within bounds, without furnishing a support for it. We are not by any means insensible to the beauty of its evergreen foliage and delicate flowers; but these are shared in an equal degree by many other plants; among which may be mentioned the *Macartney Rose*, which is of a closer and denser habit. There are a multitude of plants that seem well adapted to hedging, and experience can only enable us to decide upon the best. The *Osage Orange*—with its vigorous growth; toughness and density of woody fibre; dark, rich, glossy foliage, and formidable thorns—would be perfect if it was an evergreen. The "wild, unpruned" hedge, seen by our correspondent in Texas, cannot, of course, be regarded as a fair specimen. A hedge is mainly an artificial production, and its beauty is entirely dependent upon the taste and skill of the grower. The *Crataegus Pyracantha* promises well; but it is not a really handsome evergreen—the foliage often assuming a dingy or coppery hue, which detracts greatly from its beauty. We had never thought of its economical uses, as a hen's nest, until "JENKINS" alluded to it; but, query, is it not a perplexing and hand-scratching operation to hunt out and secure the said eggs? We should greatly prefer the regular poultry-house fixtures as a receptacle for the "hen fruit" yielded by our "biddies." The *Juglans* tree would make a very beautiful and formidable hedge, but it is yet quite rare. We shall, in a future number, publish an article on Hedges from the *Horticulturist*, with some remarks on the adaptation of the several plants mentioned, to the South. Our correspondent and others will oblige us by contributing further notes of their experience, for publication.—Eds.

CROPS IN ARKANSAS—PLOWING IN TIME OF DRY WEATHER, &c.

EDITORS SOUTHERN CULTIVATOR—In consequence of the great failure of the corn crops last year, there was more wheat sown in Arkansas last fall than ever before in one season; the yield has been better than usual; so that, whereas corn and corn meal have been selling for months past at from \$1 50 to \$2 per bushel, wheat can now be bought (and that of the best quality) at \$1 per bushel. So, you see, that the suffering which was at the doors of many people has been dispelled.

Corn crops are generally more promising than usual, which is in part owing to the continued dry weather in the months of March, April and May. If May had given us anything near the quantity of rain that we had in the corresponding month of last year, and had been followed with the amount of rain we have had in June, our crops would now be suffering severely. The reason is this: a great quantity of rain in May would have saturated and baked the ground together compactly, which would have rendered the land unfit for enduring the dry weather in June; on the other hand, during the dry months of March, April and May our fields have been repeatedly and thoroughly plowed, the land has been kept loose and light, consequently the unprecedented heat which we experienced in April and May did not penetrate the loose and well plowed soil so as to evaporate the moisture therefrom. During all this month, though we have had but little rain, the plow and the hoe easily found their way to moist earth; hence our crops have not suffered.

What is the secret taught by these facts? It is the same which was preached for ten years by old EDMUND RUFFIN, through the *Farmer's Register*, and has been again and again repeated to the many readers of the *Southern Cultivator* through its richly filled columns: that a thoroughly and deeply plowed soil, and that kept in loose condition, will endure a drouth which cannot be successfully met by a hard, badly tilled surface.

I have been away from home the most of my time for nearly two years past, so that I have not had an opportunity to read the *Cultivator* as regularly as I wished, but do not value its contents the less on that account.

I have made daily Meteoric Notes at my residence during several years past, in part for my own amusement, and in part for their publication, hoping that some usefulness might be derived from them. If you would consider such matter worth a place in your paper I propose to furnish extracts from my tables for its columns; if not, my feelings shall not be moved at a rejection of my proposition.

Yours truly,

ALLEN MARTIN.

Near Little Rock, Arkansas, July, 1855.

REMARKS.—We shall be much pleased to receive the notes alluded to by Mr. MARTIN, for publication.—Eds.

THIS article was unavoidably crowded out of our September number, but we hope its suggestions may still be of some value to our readers:

SECURING CORN AND CORN FODDER.

MAIZE being the most important agricultural staple of the United States, how to gather and secure for future use its various products, are questions of universal interest. The amount of corn badly damaged in the field and in the crib, and the annual loss sustained by the unwise management, or perfect neglect of the blades, stalks and shucks of this plant; can only be appreciated by those who are familiar with this department of farm economy as it is practiced over our widely extended republic. In some places,

autumnal sickness, to a serious extent, prevents farmers from paying that timely care to securing fodder, and even corn itself, which they would otherwise give to this crop. Fall plowing for sowing wheat, rye, barley, oats and grass seed, often interferes with corn-harvest, and the extensive curing of nutritious forage from this great American cereal at the season when that labor ought to be performed. Whatever cause may induce the cultivator to neglect any part of this most useful plant, such neglect impairs in no degree the intrinsic value either of the grain or of the maize.

Judging from the experience and practice of extensive corn-growers in Ohio, Indiana, Illinois, Missouri and Kentucky, where we have seen corn sold at ten cents a bushel or fifty cents a barrel, it can be best shucked in the field from the hill, and thrown into the capacious body of a large wagon, which is moved along by a team as the hands advance, and clear a given number of rows. There is quite as much slight-of-hand and professional art in shucking corn as there is in picking cotton.

Where the saving of shucks is an object, corn should be early gathered, that the shucks may be taken out of the weather at the earliest practicable moment. The same remarks apply to the early gathering of blades and topping of stalks. In order to make the most of the crop for forage, the whole is cut up near the ground at the North, while the plants are yet green, just after the seeds are glazed. The grain matures in the shock, while the fodder is worth for feeding stock quite as much as the corn, being housed as soon as it is cured. Every year we are amazed at the waste of money by Southern farmers in allowing their grain crops to stand for weeks and months in the fields where they grew, in small stacks or shocks. In this way, wheat, rye and oat straw is nearly ruined for all feeding purposes; and corn forage fares no better. This unaccountable disregard of one's best interest in valuable crops, after they have been grown and half harvested, is the main cause of so much poor stock in all the planting States. Cattle, horses, mules, sheep and hogs must have good treatment every day of their lives, before they can approach perfection in form, and the highest profit to the owner and breeder. Corn-plants, raised expressly for forage, cut, cured and housed at the right time, make cheap and excellent hay, equal to the best that is ever made from timothy, or any other grass. With first-rate management, the capabilities of corn for feeding man and all his domesticated animals can hardly be over-estimated. Indeed, it approaches so nearly to a free gift of Nature, that many appear to think that the harvest of corn may be indefinitely postponed without loss in fodder or grain. Pulling fodder and putting it up in small stacks to stand for months, is bad economy. Every plant and leaf, cured as forage, ought to be immediately put into a large stack, if circumstances prevent its being well housed. A large stack, if properly constructed, will keep corn blades, stalks and shucks nearly as well as a barn. We have seen sixty tons put into a single stack, which was still further protected by a covering of straw. Of course, juicy corn stalks will rot if put up in this way; but when duly dried, they will keep as well as a bundle of dry blades, or one of wheat. Timely care and proper industry are greatly needed in making the most of a crop of corn. Those of our readers who are feeding hogs for market, should push them now, and get them early to the consumer; for meat will fall in price in a few months.

L.

AGRICULTURAL PROSPECTS SOUTH—THE CROPS, &c.

THE *Columbia Carolinian* of August 25, says:—"One bale of new cotton was received yesterday by the Greenville and Columbia Railroad from the plantation of Capt. T. Q. J. Robertson of this District, and bought by Richard Anderson at 12½ cents, weight 508 lbs.; quality middling fair."

A correspondent of the *Savannah Journal & Courier* writing from near Forsyth, Monroe county, Ga., under date of the August 22d, says that the cotton crop, though subject still to many drawbacks, is looking remarkably well, and promising much the largest crop ever made.

Another correspondent of the same paper, writing from Tallahassee, Fla., under date of August 20, says:

"Our crops are not equal to the promise we had a few weeks since. Many fine looking stalks of corn are found, since they have been stripped of their blades, to offer nothing but an overgrown shoot; and although the crop is ample for the consumption of the country, it will not be near so large as we at once anticipated.

"The cotton crop has shedded much from excessive rains in July and the early part of August, and now, from a sudden cessation, accompanied by a burning sun, the earth is hard and crusted, and the old lands are threatened to rust badly. I do not consider my prospect to-day good for more than two-thirds of what it was three weeks since. Whether my neighbors are as bad off as myself I know not."

The *Eutaw (Ala.) Observer* of the 18th of August says:

"The wet weather during the two weeks preceding this, caused the cotton to shed a great many squares, and many places we hear the boll-worm has done great harm. But if the present weather continues, we are informed there will be an unusually fine crop. Many planters will commence picking next week, and if we felt competent to make a suggestion, we would say there is as much in gathering a crop as there is in making it. A great many good farmers neglect this important part of the year's work, and the consequence is, the fall rains set in, about the time the first opening should have been housed, and then it is trashy and clings to the burr, and a hand cannot pick near as much in a day. The cotton picked early is nicer and brings invariably a better price; if our farming friends would have three or four apartments, and keep the different pickings separate, it would more than pay them for the trouble. The cotton thus separated should be ginned and picked to itself. But it is the custom of many to pay little regard to this matter, and the loss is in the sale of the cotton."

The *Shreveport (La.) Gazette* of the 11th of August, reports the crops doing well. Rain had fallen in abundance and the weather was pleasant.

The *Homer (Clairborne parish, La.) Advocate* of the 8th of August, says:

"Our cotton crop is suffering very much for want of rain. The corn crop is made, such as it is. It is now generally conceded that there will not be a full average crop of either corn or cotton made in this parish this season."

The *Natchitoches Chronicle* of the 11th of August says:

"Our planters are now busily engaged in picking cotton; from all appearances we think the crop in our parish will prove an average one. A sufficiency of corn has been made."

A letter to the *Concordia Intelligencer* from Black River, Concordia parish, says:

"The crop of corn in this section of the parish will be uncommonly large this year. The rains interfered some with the curing of fodder, but still enough has been secured for ordinary consumption.

"The cotton crop has suffered from the rains—many forms and young bolls have shedded off, and the showers have caused some blooms to fall in consequence of wetting the inside and producing a formation which destroyed the nascent bolls. The rust has also damaged some fields more than has formerly been known here. Recently the rot has made its appearance here in the cotton fields, and is continuing to spread and increase, as it usually has done in former years."

The *Point Coupee Echo*, of the 18th of August, says:

"Visiting, a short time since, both the upper and lower portion of our parish, we had an opportunity of seeing the condition of the crops. On the Archafalaya they are looking finely, and rarely have we seen such crops of cotton. Sufficient rains had fallen to greatly benefit both the corn and cotton, and the yield of the former has been larger than anticipated.

"On the Grosse Tete, we are sorry to say, the rot has made its appearance on some of the places, but not to any considerable extent. Quite a number of the planters have commenced picking their cotton, and some of them in gathering their corn find that they have made more than they have room for. Those who, on account of the drouth, were compelled to plow up their first crop and re-plant, have succeeded remarkably well. The second crop is looking extremely well and promises a yield superior to that planted several months previous."

The *Memphis Whig* of the 14th of August says:—

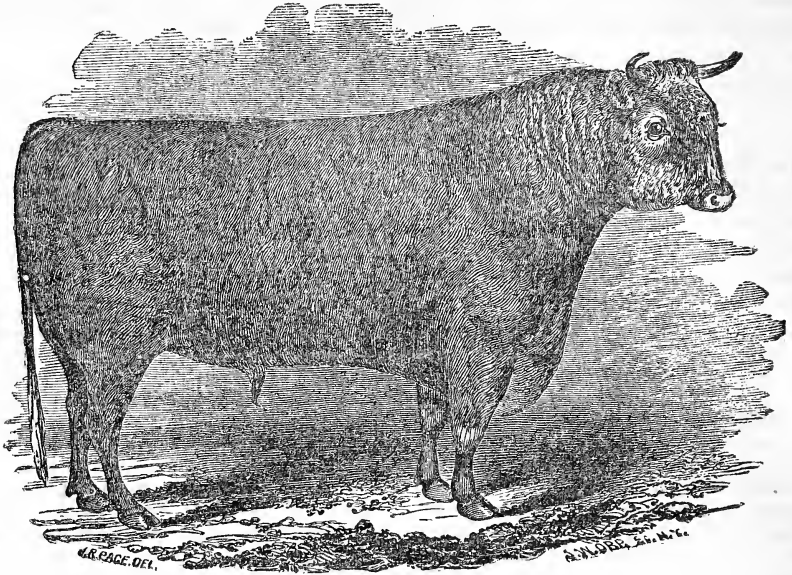
"From almost every portion of this region of the cotton growing country we hear very favorable reports of the prospects of the crop, which is now fast maturing and opening, ready for the pickers to commence operations in the field. While the growth is very luxuriant, the stocks are well filled from top to bottom with bolls, blooms and squares, and the more matured bolls are opening rapidly."

The *Vicksburg Whig* of the 18th of August says:—

"We have conversed with several planters living in the vicinity during the last week in relation to the growing cotton crop. They are all of the opinion that the crop will be a short one. They say the late dry weather on the hill lands has caused all the late blooms to fall off—consequently, there is no cotton on the stalk only what is nearly matured—therefore, the picking season will soon be over, and the crop a light one. We believe the river lands are all more or less affected in the same way."

BEAR GRASS.—The *Pilotta (Fla.) Sun* says:—"Dr. Sweaberg and another gentleman have been sojourning in our town a few days, on their return from an exploration of the country on the river above this place. They selected this season as the most unfavorable that they might see the worst condition of the country. The object of Dr. Sweaberg is to establish a number of German families, to cultivate the Bear grass and Sisal hemp, which he believes can be profitably cultivated for cordage and sail-cloth. The bear grass can be cheaply prepared by a chemical process so as to be of very fine fiber, from which a very good quality of cloth is fabricated.

He is satisfied with the country and the practicability of the enterprise. We were not before aware of the value of the bear grass, and are inclined to think it possible that at no distant day it may equal in value the cotton crop now shipped from East Florida.



NORTH DEVON BULL,
"FRANK QUARTLY,"* (205).

Bred by Mr. JOHN QUARTLY. Winner of the 1st prize as an aged Bull at the New York State Show in 1854. 1st prize as a two-year old at the New York State Show in 1853, and 1st prize at the American Institute in 1853. Bred by Earl of Exeter (38), g. sire Baronet (5), dam Curly (96), by Favorite (43), &c.

Calved March, 1851. Bred by Mr. JOHN QUARTLY, of Molland, Devon. Property of and selected by L. G. MORRIS, of Fordham, New York, in 1852.

Sire, Earl of Exeter (38), grandsire Baronet (6); dam Curly (96) by Favorite (43), grand dam Pretty Maid (366), great dam Curly, great great grand dam Old Curly.

M. B.—Curly and her dam were esteemed by Mr. FRANCIS QUARTLY two of the best cows he ever bred.

*Davy's Devon Herd Book.

RYE AND BARLEY FOR WINTER PASTURAGE.

LIVING in about the same latitude as your correspondent in Texas who is desirous of knowing the qualities of Rye and Barley for winter pasturage, and having had some experience in winter pasturage, I will give him the result, hoping it may have the effect to induce further experience among some of your numerous readers in this section.

I have ascertained from experiments that September and October are the best seasons for sowing rye and barley for winter pasturage. And if sown in rich soil it will be suitable for pasturing in January, and can be constantly pastured until April or May, when it becomes tough, and shows a tendency to go to seed. It should then be turned under with a large plow 8 or 10 inches deep, and the land will be in a good condition for a summer crop. If the rye is left to go to seed the straw is of little value and it is not liked by stock, and has but little nutriment. As regards the comparative value of rye and barley, rye has preference, being more tender and nutritious. Barley has the advantage of a more rapid growth at first, but it decays earlier and does not grow as rapidly as the rye after having been fed off, and the rye is preferred by stock.

I had, a few years since, a field of rye and one of barley adjoining. The enclosure was open so that the stock could feed in both or either, and I found they ate the rye

off close to the ground, whilst the barley was from 6 to 8 inches high. I also tried the experiment of keeping a milch cow for a week on the different pastures, and I found the week's pasture on the rye had the preference both in quantity and quality of milk and butter, since which time I have abandoned the barley pasture and only sown rye. I have also been experimenting with several of the northern varieties of grasses, such as Timothy, Orchard grass, Kentucky Blue grass, Lucerne, Red and White Clover, Italian Rye grass, Iverson Rescue, and the South American Evergreen. The seed of the latter I procured last fall from Dr. N. B. Cloud, editor of the *American Cotton Planter*, and which I am inclined to think is the best adapted to our section of any of the varieties I have tried. Although the past winter has been a very unpropitious season for grasses, having been very dry and cold, still this variety has continued to grow, and afforded good pasturage all the spring, and is still looking well, having now commenced to go to seed. I intend saving all the seed I can for further experiments this fall. My experiments with red and white clover have also been very satisfactory, and have convinced me that, with the use of proper fertilizers, and care in preparing the ground, we can grow as fine crops of clover here as in any other part of the Union. I sowed my clover about the first of November last, which, by the by, is about one month since, and it is now from 8 to 10 inches high, and in bloom; but to get a good stand of clover for a permanent winter

pasture, it should not be pastured the first year. I am also cultivating a native summer grass I found in my garden and intend saving the seed. I have just measured a stalk of it, which measured 4 feet 8 inches, and is very tender and juicy, and I am inclined to think it a superior summer grass.

I am convinced from my observations and experiment, that, with the proper fertilizers and cultivation, ours is the great grass growing section of the United States, and if the eastern people who have for years past furnished this section with hay, could make one half the quantity to the acre that we can from our native grasses, they would have made fortunes by the traffic; but the high price the eastern hay commanded here the past few years, has directed the attention of a few to the cultivation of the different varieties of foreign and native grasses, and I hope the results of these experiments will prove so favorable that in a few years such an article as eastern hay will not be found or known in our markets. P. B. POMEROY,

[in Country Gentleman.]

Mobile, June 25, 1855.

HOG RANGES.

When you speak to a cotton planter about raising his own meat, and enough to supply his doctor, merchant, blacksmith, &c., he will, without hesitation, tell you that it will not pay. He can make more by planting cotton, even if he has to buy his own meat, or the greater part of it. This we admit is true, when cotton ranges at better prices than at present, provided he has to feed his hogs exclusively on corn and peas. But we do not admit the necessity of this process of making bacon. There is a much cheaper process than this opened to all the planters of this country, and a better one than to make cotton, and pay freight to Savannah, and then pay freight on hogs from Tennessee. Some of our cotton planters have long since got a partial insight into this plan, and the result has been that they are much better off than those who buy their own bacon. The most thrifty planters in Hancock, are those who raise their own flour and pork, at the risk of raising less cotton, and yet there is a plan by which they can raise it much cheaper than they do.

Every farmer should have a hog range attached to his farm. It should have a good stream of running water, and might embrace from ten to one hundred acres, according to the amount of pork to be raised. The major part should be a forest which would answer the double purpose of raising timber for wood and acorns for your hogs. All the undergrowth should be cut out and burned. The dead trees cut down and split for wood and rails, as well as all the thick growth of saplings, pines, gums, dogwoods, and in fact all but oaks, hickories, walnuts, mulberries, persimmons, &c. The oaks should not stand thick, but let in plenty of air and sun, and they will bear much better. One oak standing thus isolated will bear as much as half a dozen crowded. Particular attention should be paid to persimmon trees, in saving all that might bear. They will prove of immense value.

Now for the orchard part. As many as you please. Plant plum trees that will ripen in May, June and July and some even later, in squares six feet each way, and they will soon cover the ground. Set out peach trees ten feet each way, of such kinds as will ripen from June to October, and try and plow them twice a year if possible, and you will have fruit that will gladden the heart of a porker. Farmers who will begin this fall by transplanting all the volunteer peach trees about their premises will, in three years, have a fine orchard for their hogs.

With such a hog range, the farmer would have but little need to make drafts upon his crib, only in quantities to keep his hogs tame. The acorns, hickory nuts, &c., would keep them during the winter and spring, and

peaches, with the gleanings of the oat and wheat fields, would keep them till fall. Then the pea crop and the persimmons would bring them up to acorn time again. Potatoes, ground peas, turnips, mulberries, blackberries, muscadines, &c., would help, and the result would be, instead of sending off hundreds annually to Kentucky and Tennessee for pork, it would return into your own pockets in various ways. You would not only save your bacon, but you would increase the value of your farm, the amount of such a farm, with no such appendage. Who will try it?—*Central Georgian.*

WHEAT CULTURE—BLUE STONE OR BLUE VITRIOL—ICE HOUSES, &c.

EDITORS SOUTHERN CULTIVATOR—Having but three years experience in farming, and one only in the culture of wheat, I desire some particular information in regard to that article, since my efforts this year have been attended with a total failure. I observe from the July number of the *Cultivator* that you intend answering the inquiries of a correspondent in Louisiana relative to the subject; at which time you will highly favor me if you are able to explain the cause of snout in Wheat and how it may be obviated.

I have made many inquiries, but it has not been satisfactorily accounted for to me. I saw a communication from a Southern Planter, in the *Memphis Appeal*, recommending the use of blue vitriol as a soak—1 lb. to four or five bushels, soaked 24 hours—which course I pursued; sowed the 16th of November, which, I was aware, was too late by one month, or more, perhaps; but not knowing at the time how to sow it in cotton without injuring it, was induced to put it off until the cotton was picked out.

Some persons tell me that blue stone and vitriol are one and the same thing, which is possible, only that vitriol possesses much greater strength. I paid four times the price of blue stone for it.

I also desire that you re-publish the article in regard to the construction of cheap and efficient ice houses, for the benefit of new subscribers. Hoping to obtain some information from yourself or some practical farmers, believing as I do that "in a multitude of counselors there is safety," I subscribe myself,

Yours with the highest esteem,
RELIGIOUS LIBERTY.

REMARKS—Our article on Wheat will be found in present number. The article on Ice Houses was published in our August number. You used too much Blue Stone. One ounce and a quarter in solution, is sufficient for a bushel of seed wheat—steep for an hour, and dry by spreading out, before sowing.—*Eds.*

AGRICULTURE IN MICHIGAN.—The Agricultural College at Lansing, the capital of Michigan, is a new experiment. The State has purchased a farm of 730 acres, with the intention of establishing a regular college thereon, in which all branches of knowledge connected with agriculture will be taught free of expense for tuition. Every Legislative district is to send a number of students, who shall not only study, but they shall also actually work four hours a day.

CORN FROM AFRICA.—The *Boston Traveller* says:—"We have before us a sample of corn, from a lot of 292 bags, brought to this city a few days since, from Winnebala, coast of Africa. The importation of this useful article from that quarter, is a circumstance we had never before heard of. The corn resembles our white Southern corn, but the kernels are somewhat smaller. It is said to weigh well."

GALLS ON HORSES.—A writer in the *Wool Grower* says:—"A cooling application that will toughen the skin before use, and prevent inflammatory action when used, is what is needed for the work-horse. From long experience, I have found these results to follow the use of spirits saturated with alum. I keep a bottle of alum and whisky in the stable and bathe the part pressed by the hames, or breast collar, and also the back, for several days before the horses commence their spring work, and also along through the season occasionally, when there is special danger of scalding the breast. I have thus passed entire seasons, employing constantly not less than five horse teams in farming uses, and have not lost the service of a horse a single day, for years together, on account of sore back or breast. This remedy will enable a sore to heal, although the animal continues in constant use."

WE publish the following by request of the author, and commend its suggestions to the consideration of our readers:

AGRICULTURAL EDUCATION.

Columbus, 20th March, 1855.

REV. C. P. B. MARTIN—Dear Sir:—Your esteemed favor of the 17th inst., has been received. You will please accept my thanks for the concern which you are manifesting in the promotion of the great agricultural interests of the country. I think your plan is not only beautiful in theory, but well suited to impart valuable information, and perfectly practicable in its adaptation to the wants of the country. It is difficult, however to anticipate what public sentiment will approve, and it occurs to me that it might be well to elicit expressions of opinion by a little agitation of the subject before the public, and I, therefore, suggest the propriety of publishing your letter, and tender to you the privilege of the columns of the *Soil of the South* for such additional thoughts as you may desire to offer, in support of the plan. This will probably draw out others, and in this way, the whole subject may be discussed and the public mind be prepared for its adoption. I have not thought sufficiently on the subject to very confidently offer an opinion, but should be glad to have the question examined, and see some move made for the training of the young men of our country, to meet the emergency which our wretched systems of culture has forced upon us. You will please excuse me for not saying more on this subject now, as it is one which concerns the whole country, and I hope you will consent to let them have the benefit of what either of us have to say.

I am very respectfully, your obedient servant,
JAMES M. CHAMBERS.

Synodical College, April 20th, 1855.

COL. CHAMBERS—Dear Sir:—Having reflected upon the suggestion of your note to allow my letter to you of March 17th to go into the *Soil of the South*, I have concluded to submit it to you for publication, hoping that by so doing, it may contribute, at least so far as suggestions are concerned, to the awakening of thought and deeper interest among the people of the State upon the subject of which it treats—Agricultural Education.

Yours, very truly,
CARLISLE P. B. MARTIN.

COL. JAMES M. CHAMBERS—Dear Sir:—The interest you have manifested in efforts to promote agricultural improvement and the opportunity your position as editor of the *Soil of the South* has given you to judge correctly concerning the practicability of the plans which may be entered upon for that purpose, induce me to address you and ask your opinion respecting the probable success of an enterprise, which I have long desired to carry into

operation; but concerning the success of which, though all agree as to its desirableness and usefulness, there has nevertheless obtained among my friends, to whom I have submitted my plan a difference of opinion. The enterprise, to which I refer is a scientific and practical college connected with Agriculture. That you may be able to form a correct judgment concerning the enterprise, I will lay my plan before you a little more fully:

FIRST ITEM.

The Course of Study.

I. *The English Language.*—In its Orthography, its Grammar, its Rhetoric, its Logic.

II. *The Earth.*—Its Geography, Mineralogy, Geology and Chemistry.

III. *Number and Quantity.*—Embracing Arithmetic, Algebra, Geometry, Trigonometry, Surveying, Civil Engineering.

IV. *Natural and Moral Science.*—Embracing Natural Philosophy, Meteorology, Botany, Chemistry, Agricultural Chemistry, Ethics.

V. Intellectual Philosophy, Political Economy.

VI. Ancient and Modern Languages, when desired.

SECOND ITEM.

In connection with the Institution, I propose to have a Farm, say, of two hundred acres of land, to be cultivated in the most careful and scientific manner, and every operation of the farm to be made the subject of daily observation and note by the students. A regular note-book is to be used by each student for the daily record of every operation, and an hour each day is to be appropriated for farm inspection as much as for recitation in the school-room. Observations will also be made and notes taken concerning the weather, the amount of rain, and other phenomena in meteorology.

I do not deem it necessary to enter into a minute explanation of the application or the carrying out of this plan in detail to you, for you will at once perceive that it embraces the character of the soil, the kind of manures used, and the manner of preparing them, as also the mode and time of applying them; the manner of plowing, the kind of plow; the time of plowing; the time and manner of planting; the culture; the result.

The carrying out of the plan just sketched will be a scientific school, for all the knowledge acquired would be classified, science being classified knowledge; it would also be a practical school, for all the knowledge acquired would be at once applied. Agricultural Chemistry, in some form or other, would be a subject of daily study. With the smaller students, such a text book as Johnston's "Agricultural Catechism" would be used, and with the larger or more advanced scholars Gray's Agricultural Chemistry, or some other of equal value, as Johnston's Leibig's, Waring's, &c.

I do not propose to make it a *Manual Labor School*; the labor of the farm is to be performed by farm hands as on any other plantation. The Farm and all operations thereon are, so far as the school is concerned, merely for observation, illustration and experiment. It is to be the great laboratory of the school—it is to be its "cabinet" and "herbarium." This being the case, you at once perceive that Botany, Mineralogy, Geology and Agricultural Chemistry will be taught practically.

I do not propose in this communication any argument to show the advantages, distinctive and characteristic, which must result from an education conducted on this plan. They lie so apparent, it seems to me, upon the very surface of the system, that I only wonder that all the schools in the land have not been modeled upon this practical idea. I will, however, simply add the remark, that the distinctive characteristics of the plan of education I propose, are observation, experiment and practical application. For this purpose, in addition to the facilities afford-

ed the students in their regular duties on the farm grounds, I would have them make annual excursion, for botanic and geological study. I wish to see a system of education established which shall develop more fully the powers of observation, of correct reasoning, of just analysis and of drawing correct conclusions from the facts observed and the analysis made. And would not the system I am laying before you accomplish these ends? Is it not based upon the true Baconian Philosophy, of induction of principles and practice from observed facts? Who can estimate the amount of useful knowledge a youth would acquire in three or four years, say from fourteen to eighteen years of age, under such a system of observation and experiment as I have mentioned? Would he not know arithmetic? Could he not survey a field? Would he not be familiar with Botany, Mineralogy, Geology, and Chemistry? Would he not be familiar with the composition of soils and manures? and of plants and grains?

We have had exhibited in Georgia within the past year, a noble illustration of the high estimation in which agricultural knowledge is held by one of our most distinguished citizens. I allude, of course, to the liberal endowment of the Terrell Professorship in the State University for Agricultural Chemistry by Dr. TERRELL, of Sparta. I can speak of this donation, so far as the *animus* of the endowment is concerned, in none other than in terms of the highest commendation, but I cannot think, however, that the mode of applying it is altogether the most effective and best calculated to accomplish the end desired. Had the same amount of money been expended in founding an Institution such as I have sketched, it does strike me that it would have accomplished a much larger amount of good. It is true, a learned and competent Professor has been found in Dr. LEE to fill the Chair, yet we know, that what we learn *practically* in all the sciences—Botany, Mineralogy, Geology and Chemistry—which sciences are the *frame work* and *soul* of agriculture, is of infinitely more value to us than the demonstrations of the lecture room, however learned and beautiful. These, we know are soon forgotten. What we most want to advance the noble science of agriculture is the blending together of the demonstrations of the lecture room and the demonstrations of practice. Let the student see the operations as well as learn the fact.

Much good sense is found in a short article in the January number of the *Soil of the South*, taken from the *Working Farmer*, called "Agricultural Education." Its recommendations tally with my plan. Please let me hear from you at your earliest convenience. If I have failed to make myself fully understood, I shall be happy to write you again. I am just out of bed from an attack of Neuralgia, and I am scarcely able to write at all.

Very truly, your obedient servant,

CARLISLE P. B. MARTIN,

Synodical College, Griffin, Ga., March, 1855.

[*Soil of the South.*]

CROPS IN NORTH ALABAMA.

EDITORS SOUTHERN CULTIVATOR—I have read your request—that your friends should send you *brief* accounts of the condition of the growing crops from their respective neighborhoods.

I have never written a line for an agricultural paper in my life, but as I believe the farmers in this county are just at this time too much engaged in politics to attend to your request, or even their own farms, I have taken up a feather just to tell you that we have now, after a long drouth in the early part of the season, a very fine prospect for an abundant crop of corn, if not of cotton. The corn is well grown where it has been carefully tilled, and is shooting and silking, and the rain is now pouring down in torrents, and soaking well-plowed ground thoroughly,

which, for the month previous, has been sufficiently watered; and the present rain will make an excellent crop if we should get no more. Cotton that was planted early, say from the 6th to the 15th of April, looks fine, and is blooming and bolting; but later cotton came up very irregularly, and a good stand was not obtained till the latter part of May, when a rain came and brought up the seed. Of course the late planting cannot yield abundantly, unless the fall season should be very propitious. The wheat crop is harvested, and very abundant, more so than for many years. Late oats are very good, and have generally been, or being, cut; but the winter or early variety, owing to the unusual spring drouth, did not grow very high nor head well.

Yours truly,

JUNIOR.

North Alabama, July, 1855.

FOR FARMERS—ONE ACRE OF LAND.

EDITORS SOUTHERN CULTIVATOR—If you think the following worthy of a place in the columns of your valuable journal, insert it for the benefit of its numerous readers:

4.840 square yards is *exactly* one acre, neither more or less, but the very thing itself.

69.57 yards square, or 69 yards and $20\frac{1}{2}$ inches each way, is nearly one acre.

208.71 feet square, or 208 feet and $8\frac{1}{2}$ inches each way, is nearly one acre.

2.304 $\frac{1}{2}$ inches square is one acre nearly.

A piece of land 10 by 484 yards; or 20 by 242 yards; or 30 by 161 $\frac{1}{2}$ yards; or 40 by 121 yards; or 50 by 96 4-5 yards; or 60 by 80 $\frac{2}{3}$ yards; or 70 by 69 1-7 yards; or 80 by 60 $\frac{1}{2}$ yards; or 90 by 57 7-9 yards; or 100 by 48 2-5 yards, is exactly one acre, neither more or less.

Yours respectfully, A. L. McC—

Selkirk, S. C., Sept., 1855.

ORIGIN OF VARIOUS TREES, PLANTS AND SHRUBS.

WHEAT was brought from the central table-land of Thibet, where its representative yet exists as a grass, with small, mealy seeds.

Rye exists wild in Siberia.

Oats wild in North Africa.

Barley exists wild in the mountains of Himalaya.

Millet, one species is a native of India, another of Egypt and Abyssinia.

Maize was brought from America.

Canary Seed from the Canary Islands.

Rice from South Africa, whence it was taken to India, and thence to Europe and America.

Peas are of an unknown origin.

Lentils grow wild on the shores of the Mediterranean.

Vetches are natives of Germany.

Chick-Pea was brought from the South of Europe.

The Garden-Bean from the East Indies.

The Horse-Bean from the Caspian Sea.

Rape-Seed and Cabbage grow wild in Sicily and Naples.

The Poppy was brought from the East.

The Sunflower from Feru.

The Lupin from the Levant.

Flax or Linseed is, to Southern Europe, a weed in the ordinary grain crops.

The Nettle is a native of Europe.

Woad is a native of Europe.

Madder came from the East.

Dyer's Weed grows in Southern Germany.

Safflower came from Egypt.

Dill is an Eastern plant.

Hops, Mustard, and Caraway Seed come to perfection as wild plants in Germany.

Anise was brought from Egypt and the East Archipelago.

Coriander grows wild near the Mediterranean.

Saffron came from the Levant.

The Onion out of Egypt.

Chickory grows wild in Germany.

Tobacco is a native of Virginia and Tobago; another species has also been found wild in Asia.

Hemp is a native of Persia and the East Indies.

The Garden Cress is from Egypt and the East.

The Currant and Gooseberry came from Southern Europe.

The Pear and Apple from Europe.

The Cherry, Plum, Olive, and Almond came from Asia Minor.

The Mulberry Tree from Persia.

The Peach and Walnut from the same.

The Quince from the Island of Crete.

The Citron from Media.

The Chestnut from Media.

The Pine is a native of America.

The Horse Chestnut from Thibet.

Celery originated in Germany.

The Chestnut came from Italy.

Parsley was first known in Sardinia.

The Pear and Apple are from Europe.

The Spinach was first cultivated in Arabia.

The Gourd is probably an Eastern plant.

The Cucumber came from the East Indies.

The Radish is a native of China and Japan.

Peas are supposed to be of Egyptian origin.

Horse-radish came from the south of Europe.

The Zealand flax shows its origin by its name.

Dyer's weed is peculiar to southern Germany.

The Jerusalem Artichoke is a Brazilian product.

The Cranberry is a native of Europe and America.

The Parsnip is supposed to be a native of Arabia.

The Potatoe is a well known native of Peru and Mexico.

The Whortleberry is a native of both Asia and Europe.

Buckwheat came originally from Siberia and Tartary.

Linseed originally appeared as a weed in the ordinary grain crops of southern Europe.

Turnips and Mangold Wurtzels, came from the shores of the Mediterranean.

The white Turnip is supposed to be a native of Germany.

The Carrot is, by some, supposed to have been brought from Asia, others, however, maintain it to be a native of the same country as the turnip.

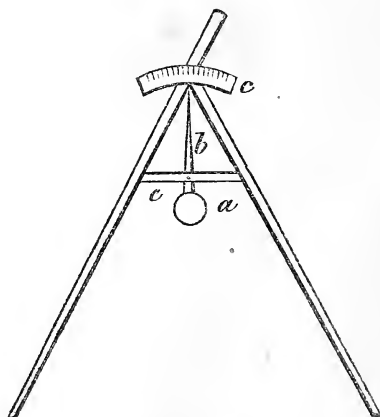
CONFIDENCE IN ONE'S SELF.—When a crisis befalls you and the emergency requires moral courage and noble manhood to meet it, be equal to the requirements of the moment and rise superior to the obstacles in your path. The universal testimony of men, whose experience exactly coincides with yours, furnishes the consoling reflection that difficulties may be ended by opposition. There is no blessing equal to the possession of a stout heart. The magnitude of the danger needs nothing more than a greater effort than ever at your hands. If you prove recreant in the hour of trial, you are the worst of recreants and deserve no compassion. Be not dismayed or unmanned, when you should be bold and daring, unflinching and resolute. The cloud whose threatening murmurs you hear with fear and dread is pregnant with blessing, and the frown whose sternness now makes you shudder and tremble, will ere long be succeeded by a smile of bewitching sweetness and benignity. Then be strong and manly; oppose equal forces to open difficulties; keep a stiff upper lip, and trust in Providence. Greatness can only be achieved by those who are tried. The condition of that achievement is confidence in one's self.—*Richmond Post.*

PEAS AND SWEET POTATOES FOR FATTENING HOGS.

Mr. Nathan Winslow, of Perquimons county, fattens his hogs for slaughter and sale, as well as for his own consumption, almost entirely on peas and sweet potatoes. From the 1st to the 15th of September, the hogs are turned on a pea field. At the same time, a small portion of sweet potato ground is close at hand, and the hogs are turned therein every day. This is done because he deems it better for the health of the hogs. Every night alternately the hogs are turned into the pea field and the potatoes—new portions of the latter being brought in as the first enclosed are exhausted. Thus kept on the peas and potatoes alone (for he supposes they get very little from the woods) the hogs become very fat. For change of food and late in the fattening, swill is added to the food, made of turnips boiled with a little corn meal and seasoned with salt. Mr. Winslow is confident that all the corn consumed during the whole time of fattening does not exceed the average of a peck for each hog. Therefore the fattening is due in a very slight degree to corn, and almost entirely to the peas and potatoes. Peas alone will fatten very considerably, but not enough to make good pork. But with potatoes the hogs are not only made very fat, but their fat is even more firm and white than of hogs fattened on corn. After cold weather requires that potatoes should be dug, they are boiled before being fed to the hogs. Mr. Winslow is a very large and successful raiser of hogs and seller of pork. I learn from others that his pork, fattened as above stated, is deemed the best in the markets.—*Southern Planter.*

LEVELING OR GRADING INSTRUMENT.

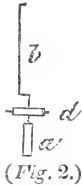
EDITORS SOUTHERN CULTIVATOR.—According to my promise, I send you a description of a Leveling, or, more properly, a Grading Instrument that I have invented. The drawing that accompanies this communication represents, as attached to a measuring compass, the part that I call my invention. It is a figure of my own instrument as first made, the compass having been made for its ordinary use before I devised the attachment. I will tell what the instrument consists of, and then describe my construction of it. And from the description of the manner in which it was constructed, it will be seen that its operation and indications will necessarily be with mathematical accuracy:



(Fig. 1.)

It consists, first, of a compass that strides three feet. (This was the stride of my compass at first, and I prefer it

to four or five feet, because three is a common measure of both 12 and 15, which are the ordinary strides of the rafter levels. And so the compass level can be used with great convenience in connection with levels of 12 and of 15 feet stride.) The other parts are (see Fig. 1.) *a*, a flat circular piece of pewter $2\frac{1}{2}$ inches in diameter, $\frac{1}{8}$ of an inch thick; *b*, a piece of brass hooping 11 inches long tapered off at one end, and an inch wide at the other end. (These parts, *a* and *b*, are connected with each other); *c* a graduated scale. Mine is divided into 24 parts—12 on each side from the centre, *a*. Now see Fig. 2. It repre-



sents the parts, *a* and *b* of Fig. 1—the letters of the two figures correspond with each other. It also shows at *d* a piece of wire passed at right angles through *b*, 9 inches from its point, and soldered to *b* in that position. This wire is about 1 inch long, and is finished at its ends with a shoulder, the object of which will be seen further on; so will the design of the bends in *b*, above the wire *d*. The wire is of such size that after it is worked down to form the shoulder, the round tenon resulting is as large as a middling size brad-awl.

I proceed now to the construction. The cross-piece *c* of the compass (Fig. 1,) is to be mortised through from top to bottom with a mortise $\frac{1}{8}$ inch wide, 3 or 4 inches long. Through the centre of this cross-piece, crosswise to the mortise, a hole is to be bored with $\frac{1}{8}$ inch centre-bit. It is best to bore it before the mortise is made. After the mortise is finished, the wood that lies above the bored hole must be removed by sawing down from the upper edge of the cross-piece two parallel strokes as far apart as the diameter of the bored hole. Then provide two pieces of brass hooping, about as wide as the cross-piece is thick from top to bottom, and of equal length with it (though 2 inches longer than the mortise will answer.) Through the centre of these pieces drill a hole as large as a common brad-awl. Drill several other holes for small screws, making none within two inches of the central hole, guarding, also, against any of the screw-holes being opposite to each other. The central holes are next to be opened out to one edge of the pieces by filing with the edge of a flat file from the edge of the pieces down to the hole—guard against the file's running suddenly into the hole, and thereby injuring the roundness of its opposite side. The two brass pieces being thus prepared, screw one of them to one side of the cross-pieces, adjusting the central hole exactly upon the bored hole in the cross-pieces, with the notch from the central hole turned upward, so as to coincide with the notch from the hole in the cross-piece. After securing one brass piece to its place, put on the other on the opposite side, and secure it like the former one. Be particular to have the central holes opposite to each other.

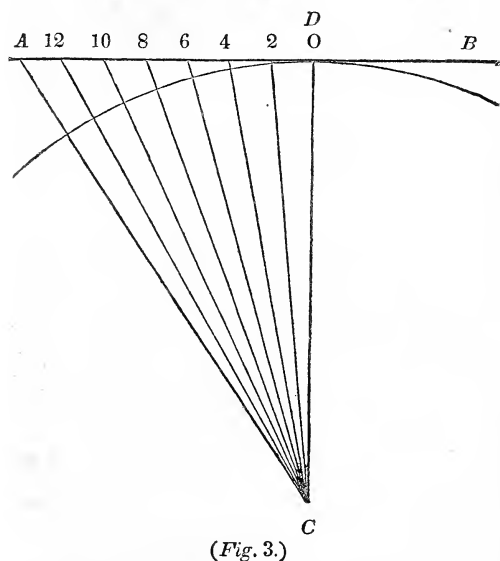
Next comes the pewter weight, *a*, and its attachment to the index, *b*. To form it, take a cylindrical block, such as merchants receive ribbons on, press the end $\frac{1}{4}$ of an inch into earth, sufficiently moist to retain the impression made; then, having melted the pewter, pour it into the impression. A better form for the weight would be the double convex, as being still less liable to disturbance by wind in the direction that might affect its indications. By a little management, the weight might be moulded upon the index, *b*. But, if this should not be convenient, they

are easily connected by running a tenon saw into the edge of the pewter weight, in the direction parallel with its flat surfaces, as if the intention were to divide it into two equal circular pieces. A half inch is deep enough to run the saw. Now, slip the wide end of the index into the slit made in the weight and solder it there, or secure it with two rivets. There must not be any motion between them after they are once fixed. The next step is to make the hole in the brass piece, *b*, for the wire, *d*, (Fig. 2). It must be drilled at 10 inches from the point. The wire to be passed through it must now be laid across the two brass pieces on the sides of the cross-piece of the compass, and just at the notch or slit that runs into the central holes. Its ends may there be accurately marked for the shoulders, and then the round tenons must be formed on them. When the wire has been so prepared that it will drop down into the slits and rest, with freedom to turn, in the central holes, the shoulders preventing it from moving much endwise, it may be taken out and passed through the hole prepared for it in *b*, allowing it to project equally on both sides. In this situation let it be soldered to *b*. The weight could now be put through the mortise in the cross-piece and suspended by the transverse piece in the central holes, were it not that the upper end of the index, *b*, would be interfered with by the frame of the compass. To obviate this, the piece *b*, must be bent twice, as seen in Fig. 2. The first bend is just above the wire. The second is made far enough from the first to admit of the piece being restored, by this second bend, to its former direction, without striking against the frame. It should not be more than $\frac{3}{4}$ of an inch from the first bend, however, as the piece would be reduced too much in length. The point of *b* is now to be finished off at exactly 9 inches from the (centre of the) transverse wire. A thin piece of stuff, such as a piece of segar-box, is now to be secured to the compass,* so that its upper edge shall be somewhat above the point of the index, when the weight has been passed down through the mortise, and the ends of the wire are in their proper place, in the central holes of the two brass pieces on the sides of the cross-piece. Now, with a pencil held exactly at the point of the index *b*, an arc of a circle must be described on the thin piece of wood, *c*.

At this stage of the work, it will be best to lay by the instrument itself, and make a scale on a piece of paper, to be transferred, in the manner I shall describe, to the scale board, *c*. The straw-colored paper of which envelopes are made, and which can be obtained from booksellers, is excellent for work of this sort. It can be got in large pieces without folds. Provide a piece of this, or some other paper, large enough to admit of a circle being described on it by means of a pair of dividers opened to the exact distance of 9 inches. In the absence of dividers, carrying a pencil, the following is a convenient and correct mode of making the desired circle:—Take a piece of stout paper (if it has been varnished, or covered with the solution of shellac, all the better); cut a strip of it about as wide as a finger, and lay down on it a rule or square edgewise, so that the length of 9 inches can be accurately dotted off on the paper. With the strip of paper still lying on a table or board, make a pin hole through each of the dots. The holes will be nine inches apart, and you will be prepared to make your circle of the size required. It will be much more convenient to have your paper fastened by the edges to a board or smooth table. Paste will answer to fasten it with. Breathe some time upon it; and while it is yet as moist as the breath can make it,

*I would recommend that this piece be covered by paper secured to it by a solution of shellac in alcohol. And when the instrument is finished, cover the paper and all the scale-board (side and edges) with this same solution.

paste the edges down. It will then lie evenly. Now, take your strip of paper, and lay it on the paper you intend to work on, placing one pin hole where you mean to have the centre of your circle. Put a pin into that hole, and tap it sufficiently to make it stick in the table. Then put the point of a pencil, well sharpened, through the other pin hole, and by means of the pencil carrying the paper around the pin, as a centre, describing the circle on the paper. Now, from the centre of the circle draw a line through the circumference, and another line across this, just where this cuts the circumference. These two lines must be drawn perpendicular to each other, and they will necessarily be so, if the last one drawn intersects the first just where the first crosses the circle, provided the last just touches the outside of the circle. This, however, must not be relied on as the means of making the lines perpendicular, for, though true in theory, it is almost im-



(Fig. 3.)

practicable. In Fig 3 may be seen this part of the work, with all the rest that is required to prepare the scale that is to be transferred to the instrument. This figure is not drawn on the same scale as Fig. 1. For being designed to show that equal divisions on the tangent becomes unequal on the arc, it was necessary to enlarge the scale. It will also be seen by means of this figure that the difference between the first three or four divisions is scarcely perceptible. And I have found that, with a 9 inch index and $\frac{1}{4}$ inch divisions for 1 foot elevation or depression, that one might easily fall into the error that they would continue equal. But to proceed with the work, the line A B is to be divided into quarters of inches, laying off the divisions each way from the point of insertion with the line C D. Then, with much precision, draw lines from these several divisions on A B, to the centre of the circle. The points where these lines cut the circle, are to be transferred to the circle made on the scale-board, c, of the compass. The best way to do this, is to cut your paper from the board or table, and then, with a sharp pair of scissors, to cut exactly around on the line that forms the circle. The round edge, so obtained, is then to be laid up to the circle on the scale and the divisions are to be dotted off on the circle of the scale. But it is all-important that the starting place of this scale be right. This is easily found. Take your compass with its weight suspended as in Fig 1, and set its feet on a floor. Mark around its feet, on the floor, with a pencil. Without moving it, look at the circle on the scale, c, and just where the index is at

the circle make a fine pencil-mark. Now lift up your compass and place each foot of it on the floor, exactly where the other foot stood when you made the pencil-marks on the floor. Without moving the instrument, look again at the circle and index. If the floor should happen to level your index will be again at the same place on the circle, and this place will be your starting point in marking off your scale. If, however, (as in all probability will be the case) the floor is not level your index will point to some other place on the circle. Make a fine pencil mark here also, as in the other trial. Now find the middle point between the two marks and dot it; this will be your starting place. Take the paper that you cut out, and place its round edge up to the arc of the circle on your scale-board, taking care to put the end of the line, that was drawn from your centre to O, exactly to the place that you have found for your starting place, and dot off your divisions numbering them each way from the starting-point, which must be marked O. The instrument is now finished.

When its feet are set down, if one is an inch higher than the other, the index will be at 1, on the side of the higher foot, and will indicate a difference of one inch in three feet, or four in twelve, or five in fifteen. If you want the divisions of your scale to be subdivided into halves and quarters, this must not be done by making equal subdivisions on the scale itself; but they must be made equal on the line A B, Fig. 3, and then treated like the other divisions. This will put them on the circle of Fig. 3; from which they may be transferred to the scale on the compass.

I have given directions for making an instrument, the compass of which strides three feet. For this reason, I say make the length of the index, from the axis on which it turns to its point, 9 inches, and then divide your line, A B, into quarters of inches. The principle on which this is done is as simple as it is mathematically correct—the ratio of 9 inches (the radius of the circle in Fig. 3, and also the length of the index and radius of the circle on the scale-board) to 36 inches (the stride of the compass or radius of such a circle as it would describe) is 4; and the ratio of $\frac{1}{4}$ of an inch to 1 inch is 4. The line B A, fig. 3, is a tangent of the circle in that figure; and a line drawn from one foot of the compass (when standing on the ground) perpendicular to the earth, is a tangent to the circle of which the compass describes an arc, when, with one foot stationary the other is raised or lowered, as is the case in the use of the instrument, at every inequality in the ground. Hence the divisions of these tangents must bear the same proportion to each other that the radii of the two circles (i. e., the length of the index and stride of the compass) bear to each other. In making an instrument of other dimensions than those of the one I have described, all the variation from any directions, for making the scale and index, is to take a different length for the index; or, should it be preferable to take the same as being a convenient length, than the divisions of the line A B, Fig. 3, must be varied so as to agree with the difference of stride between the compass, or rafter level to be used, and one of 3 feet stride. By this rule the divisions of the line A B for an instrument of 4 feet stride would be into 3-16 of an inch each. It would be better, however, to retain the divisions of the line into fourths, and to make the index correspond, by making it one-fourth of the stride (i. e., for 4 feet make it 1 foot.) The index might be made even 6 inches, by making the divisions of line A B $\frac{3}{8}$ of an inch instead of a $\frac{1}{4}$ for an instrument of 4 feet, or 48 inches, 6 being $\frac{1}{8}$ of 48.

Now, that part of the instrument which has no necessary connection with the compass as such, can be just as well attached to a rafter; and whatever ration in inches exists between the stride of the rafter, and the length of the index from the point on which it is swung, (i. e., the

wire that passes through it) the same will exist between the divisions of the scale and a standard inch. Thus, a 9 inches index and $\frac{1}{4}$ inch scale on a 12 feet or 144 inches rafter, will show, for every division of the scale 4 inches elevation or depression of one foot of the rafter—equal, therefore, to 4 inches in 12 feet; for 144 inches divided by 9—16. But as the scale is not in inches, but in fourths of inches, so the 16 is 16-4—4 inches. And this corresponds with the indications of the same instrument when attached to a 3 feet compass; 1 inch elevation or depression for every 3 feet, which is 4 inches for every 12 feet.

Let me, then, in concluding the descriptive part of this article, suggest a modification of the above instrument, whereby it may be rendered convenient of attachment to any kind of frame.

Provide a piece of well dressed and seasoned plank about $\frac{3}{4}$ of an inch thick and 10 inches wide. Take a point at midway between the two ends and half an inch from one edge, and upon this point, as a centre, describe a circle with a radius of 4 inches or a little more. Cut the circle so formed, and your piece will then have a semicircular hollow in one edge. Now secure two such pieces of brass hoop, as were fastened to the cross-piece of the compass, on the edge of your board hollowed out, (one piece on each side). They will extend across the semicircular hollow, and will face each other. The central holes must be opposite to each other, and should be about half way across the hollow. The weight and index can then be suspended as upon the compass, and a circle drawn and graduated as already described. A few holes for screws will make it ready for attachment. After describing the circle by means of the index, it would be well to cut away the excess of wood for about $\frac{1}{4}$ of an inch beyond the circle, and to make the O point on the arc of the circle about midway between the extremities of the arc. And now, as this point is supposed to be fixed upon, some address is requisite in attaching the instruments to a rafter, so that when it is level the index may be at O. For this purpose, secure the instrument by one screw only, as nearly in its right position as the judgment will enable you to do—the rafter being on a floor and held in a working position. Mark on the floor, with a pencil, around both feet of the rafter. Without disturbing the arrangement, observe where the index is, and make a fine pencil-mark on the circle. (The divisions of the circle must not be used). Now turn the rafter, and put each foot where the other stood. Without disturbing the arrangement, observe and mark again the place indicated by the index. If it should not be exactly the same as the other, find the middle between the two indications and mark it with a fine pencil. This is the point at which your index will stand if you now place your rafter on a level. But you require your index to be at O when your rafter is level, or none of its indications on the scale will be correct. We will now adjust this matter. If your rafter, by mere accident, is on a level at the place where you set it, your index will point to the same place after reversing the feet of the rafter, that it pointed to before reversing them; and you will not have to make a second and third mark: you can then also keep your rafter in this place until you have done the work, which in this position, is nothing more than turning your instrument upon its one screw until O comes to the point of your index, and then securing it by the other screws. If, however, your rafter was not level, and consequently you had to make a second mark, and then a third between the first and second; then you must have a wedge slipped under the lower foot, until the third or middle mark comes to the point of the index. Now hold the level in this position, and turn your instrument on its screw until O comes to the point of the index; and then secure the instrument in this position with the other screws. The rafter is now ready for use.

Every division on the scale is equivalent to 4 inches; for as the 9 inches radius is equal to the 1-16 of the 144 inches radius, so 1-16 of an inch on the scale would be equivalent to 1 standard inch. But your divisions, being fourths instead of sixteenths, are of four times the value, hence, instead of being equivalent to 1 inch, they are equivalent to 4 inches.

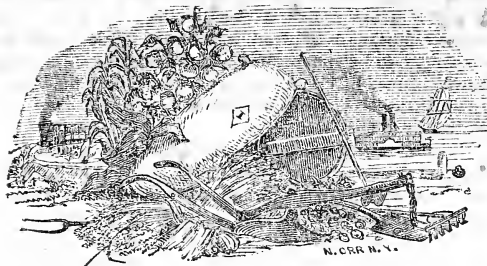
For the satisfaction of those persons who may not be disposed to examine the reasoning in this article, I will state that my compass level has actually worked most successfully in every kind of grading that is done on a farm. And, for sake of proof, I attached the compass, with the instrument on it, to a 12 feet rafter with spirit level, and tested, by actual experiment, its indications with known elevations of 1 foot of the rafter, and found them to correspond most accurately.

My instrument is the work of my own hands, with no other knowledge of the use of tools, than I have acquired by indulging a natural fondness for using them. I believe that a mechanic would find it profitable to make, for sale, so much of the instrument as may be attached to a rafter or compass, marking on each the value of the divisions of the scale to a given stride. And from this their value to any other stride could easily be found. For example, suppose the instrument to be marked 1 inch to 36 inch stride, meaning that on a compass of 3 feet, or 36 inches stride, the divisions of the scale are equivalent to 1 inch; then, to ascertain their value on a rafter of 12 feet, or 144 inches, make the statement 36 inches stride to 144 inches, as 1 inch val. to 4 inch val.

The advantages of this Level are more than I can point out at the end of this long article. I would briefly say, however, that, unlike the spirit level, it shows the amount of elevation or depression, and therefore can be used for any grade, varying it at pleasure, without any re-adjustment. And if, in running horizontal furrows, or hill-side drains, a stump or tree, or hole not sufficient to warrant a change in the direction, should come in the way of the foot of the instrument, it may be placed on either side of the obstacle, and the index will show how much too high or too low it is; and at the next step a compensation is easily made if there was loss, or, if there was gain, as much may be deducted; and this, too, without the least detention. This may be done with the plumb and line level, provided it has a scale. But unfortunately if it has, it must necessarily be so low down, to be very inconvenient to observe; and it is liable also to be interfered with by bushes. The plumb-line is also liable to disturbance by wind, and is altogether an awkward thing, for you cannot help it much in settling. But you can make my level settle by a touch of the finger, easily made, as it is raised to a convenient height. Another advantage over the spirit level is, that, by means of mine, you can decide, between several points, which is the highest, or lowest, and what the difference is. In this way, you may ascertain what direction flowing water will take. Now, with the spirit level we can find that a point, as A, is lower than B, but to know whether B is higher or lower than the rest of the surrounding surface, the entire level must be lifted and its feet so placed that a comparison may be made between B and the surrounding surface. And then when you have thus found that C is higher than B, you do not know whether it is as high as A. But suppose my level to be used—one foot may be kept on A, while the other is carried around a full circle, and the relative heights of all the points touched may be read off from the scale. The lowest is fixed on as the course of running water going from A. I have found great practical advantage in this peculiarity of my instrument. But, like others, they are more readily appreciated in practice than in reading any description of the instrument or its application.

WM. JOHNSON.

Glenwood, Tuscaloosa Co., Ala., August, 1855.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 10.....OCTOBER, 1855.

ANSWERS TO INQUIRIES, Notices to Correspondents, and many very interesting communications, are unavoidably deferred till our next.

TENTH ANNUAL FAIR OF THE SOUTHERN CENTRAL AGRICULTURAL SOCIETY, OF GEORGIA.

THE Tenth Fair of our Central Society, opened at *Atlanta* on the 11th of September, and continued four days. The number of visitors from all parts of the South was very great; and considering the earliness of the season, and the extreme warmth of the weather, we cannot but regard the exhibition as quite respectable. Without attempting to enter into a detailed account of the various articles on exhibition, we will endeavor briefly to present a general view of the different departments:

HORSES, JACKS AND MULES.—There was an unusually large, and a very fair show of all these animals, especially the former; which were out in greater force than on any previous occasion. The average number of good horses on the ground was quite gratifying; but we are not aware that any of very marked or peculiar excellence were presented.

CATTLE.—The greatest deficiency of the show was apparent in this department, which fell far short of public expectation. The only animals worthy of note were the well-known *Decons* of R. PETERS, of Atlanta, Dr. HARDEN, of Watkinsonville, and Col. WATTS, of Cartersville. The latter gentleman also presented some samples of the Short Horn, or *Durham*; and grades of both these breeds, natives, &c., were shown by others.

SHEEP.—Col J. W. WATTS, of Cartersville, Ga., presented some very good samples of the fine-wooled French and Spanish *Mirino*, *Broad Tail* Sheep, &c.; and superior specimens of the active and vigorous *South Down*, were shown by R. PETERS, Esq., of Atlanta.

CASHMERE GOATS.—The exhibition of these rare, beautiful and highly useful animals attracted very great attention, and was, in fact, one of the most redeeming features of the live stock department. Several of the pure *Cashmeres*, with their grades or crosses upon the common stock, were shown by R. PETERS, Esq., of Atlanta, who now possesses nearly all the thorough-bred females of this kind in the country. The original importer, Dr. JAMES B. DAVIS, of Columbia, S. C., had, also, on exhibition a pen of three-quarter bred *Cashmere* and *Thibet Shawl* Bucks,

which attracted much notice and admiration. Samples of *Cashmere cloth*, and knit socks of various degrees of fineness, woven from the fleece of the pure animals and their crosses, were shown by Mr. PETERS, who thus practically answered the "*cui bono*?" so frequently propounded by those who are ever ready to throw obstacles in the way of progress and improvement. We would advise all such non-progressives to "clear the track" when they see the "big horns" of the *Cashmeres* looming in the distance; for there is unquestionably about these animals an intrinsic value and a vigorous vitality that will enable them to make their way rapidly into public favor. We cannot help regarding them as by far the most important addition to our domestic animals that has been made within our recollection. We have a chapter upon the introduction of the *Cashmere Goat*, and its general character and uses, for a future number of this journal.

SWINE.—The show of Swine was very meagre—the only animals worthy of note being the fine samples of *Berkshire* and *Black Essex*, shown by Mr. PETERS, of Atlanta.

POULTRY, RABBITS, PIGEONS, &c.—This branch of the exhibition, heretofore so full of attraction for "all sorts" of people, presented a lamentable falling off. No attempt was made by any person to get up such a varied collection as would command the Society's premium, and the consequence was a general lack of interest in the subject and the withholding of all premiums by the Committee. When we consider the almost universal attachment felt for poultry, pigeons, rabbits, and such "small deer," and their aggregate value, usefulness and importance throughout the country—to say nothing of that *inherent attractiveness and possessibility*, so lacking in many other and larger domestic animals—we cannot but think that a more liberal and discriminating policy on the part of the Society would have been productive of much more satisfactory results. The only note-worthy contributions to this department were made by Mr. CARTER, of Calhoun, Mr. HEGGIE, of Atlanta, and Master JOS. THOMPSON, Jr., of the same place. The two former exhibited several varieties of Game and other fowls, and the latter presented some fine Dorkings, Shanghais, Brahmas, Fantail Pigeons, Madagascar Rabbits, &c. A pair of large Hong Kong or Great Chinese Geese, and a coop of Brahma fowls, from D. REDMOND, of Augusta, were also added to the exhibition, near its close.

LADIES' DEPARTMENT.—The number of articles presented in the Ladies' Hall was not as great as on former occasions, but their quality exhibited a marked improvement. As it would be entirely useless for us even to attempt a description of the many rare and beautiful contributions that dazzled the eye on every side, we shall be obliged to leave the *tout ensemble* of this bower of taste and elegance, to the imagination of our readers, which will need to be vivid indeed, to do it anything like justice.

AGRICULTURAL IMPLEMENTS AND MACHINERY.—With the exception of a new machine for cleaning storm-stained Cotton—an improved Threshing Machine, and a few Plows of different patterns, we saw nothing of especial interest in this department.

SAMPLES OF FIELD CROPS, VEGETABLES, &c.—It was perhaps, too early in the season, to look for a full show of farm products; but we noticed fine samples of Sea Island and Upland Cotton on the stalk, white and yellow Corn, Wheat of various kinds, Rice from the seaboard, Barley, Oats, Rye, Millet, Cow Peas, Sweet and Irish Potatoes, Garden Seeds, Pumpkins, Squashes, Beets, Onions, Cabbages, &c., &c. We also noticed one bale of pressed Herd's Grass Hay, from Upper Georgia, but could not find the Cotton interest represented by a single "bag" of the "great staple."

FRUIT.—We now come to the “crowning glory” of the Fair, and that branch of all others upon which we most love to linger. Truly hath Pomona’s great disciple, the lamented DOWNING, said, that “‘*Fine fruit is the flower of commodities*,’ it is the most perfect union of the *useful* and the *beautiful* that the earth knows;” and sure are we, that all who thronged the Hall, and feasted their eyes upon the ripe and glowing products of the orchard, garden and greenhouse, would most heartily and enthusiastically subscribe to that happily-expressed sentiment. Some slight idea may be formed of the extent and richness of this magnificent show, when we state that there were on exhibition over sixty varieties of *Pears*, forty or fifty of *Apples*, ten or twelve of *Grapes*; and *Plums*, *Peaches*, *Quinces*, *Pomegranates*, *Figs*, *Olives*, &c., &c., without number. The principal contributors, were Rev. H. L. DEANE, of Griffin; J. VAN BUREN, of Clarksville; CHARLES AXT, of Washington; Rev. R. JOHNSON and W. H. THURMOND, of Atlanta, and HARRY CAMP, of Covington. Splendid hot house Grapes were presented from Capt. LYONS, of Columbia, S. C., through Col. A. G. SUMMER, who offered, also, several native Apples of unusual excellence. Having elsewhere particularly spoken of the Catawba Grapes of Mr. AXT, we need only here advert to them as among the most attractive features of the department, which upon this occasion, at least, won its full share of public regard and consideration. Indeed, we are rejoiced in being able to state that the Fruit Show of the present year has never even been approached at any former exhibition in the South; and that the cultivation of fine and well-proved varieties, and the production of new native Seedlings by nurserymen and amateurs, has received thereby an impulse which must lead to the most important and gratifying results. Deeming this matter one of peculiar interest, we take pleasure in publishing elsewhere the Report of the Committee on Fruits, &c. which was kindly furnished us by the Secretary for publication.

The spirit and improvement manifested in this department and the very convincing proofs exhibited of the capacity of our climate and soils for the production of all the finest varieties of fruit, were alone sufficient to redeem the defects and short comings of all other departments, and to stamp the Atlanta Fair of 1855 as anything but a failure.

We here close our hurried notes for the present; with the intention of presenting a more satisfactory synopsis of the general result of the exhibition, by publishing the award of Prizes, if possible, in our next issue.

PLANTING IN JEFFERSON AND RICHMOND—BARBECUES, &c.

AVAILING ourselves of a kind invitation from L. C. WARREN, Esq., of this city, we accompanied him, some weeks ago, to his extensive plantation near Louisville, Jefferson county, Ga. The entire tract owned by Mr. WARREN embraces about *four thousand acres*, of which *fourteen hundred* are about equally divided between Cotton and Corn, the present season. The whole plantation is under the especial supervision of that prince of managers, Major JOHN M. DOUGLASS, assisted by his son in law, Mr. ELIJAH SYKES; and the fine, clean, heavy crops, fat mules and happy negroes fully attested the industry, care and attention of these gentlemen. The arated lands of Mr. WARREN are generally of a very light though fertile character, easily worked during all kinds of weather, and not disposed to pack or bake. The quantity of land cultivated by each hand and mule, the past season, was from *fifty to sixty acres* (!) and when we state that that almost

unheard of “task” was as well cultivated as land ever is on our large plantations, and that the entire force of negroes and mules were, on the first of August, in really “prime order,” we think little further can be said in praise of Major DOUGLASS and his management under the present system.

That the system of heavy and continuous cropping above alluded to, has injured his lands and operated as a bar to many desirable improvements, however, Mr. WARREN is fully aware; and it is his intention to commence, without delay, the work of reform, by running guard-drains and hill-side ditches, cultivating less land, plowing deeper, raising more small grain, establishing pastures for stock, manuring, planting orchards, &c., &c. With available means, and every facility for making the improvements hinted at, we see no reason why Mr. W. should not fully succeed; and we most heartily wish him a complete realization of all the progressive plans relating to this very fine estate.

Before leaving the hospitable shades of the “Milton Place,” we participated in a most excellent Barbecue given by Mr. WARREN to his friends and servants. At this very agreeable entertainment, we met many of the intelligent and enterprising planters of Jefferson and Burke, and formed a number of very pleasant acquaintances, which we hope to extend and strengthen hereafter.

One week subsequently, we attended the “annual meeting” of WM. J. EVE, Esq., near this city. Mr. E. is well known as a most energetic and successful planter, and his anniversaries are anticipated with much pleasure by all his friends in this region. Previous to the commencement of the festivities, we rode with Mr. E. through his Corn crop, which is certainly one of the finest we have ever seen. It consists of a *thousand acres*, and if it does not harvest from *thirty to forty thousand bushels* of Corn, we shall be much disappointed. Mr. EVE has, also, about one hundred and sixty acres of Cow Peas, for hay and seed, and all the other details of his plantation culture and management are on a scale equally large and successful.

Of the Barbecues and the enjoyment which grew out of it, we could say much, but at present we have neither time or space. Suffice it to say, that the guests, one and all, entered into it with the true spirit of cordiality and good-fellowship—that the negroes, whose “spread” was equally liberal and satisfying, presented the most cheerful appearance of health and happiness—and that we came away with only the single regret that such delightful occasions as these are not more common throughout the length and breadth of our land.

CULTURE OF GRAPES.

EDITORS SOUTHERN CULTIVATOR—I find in nearly every number of the *Cultivator* something upon Grape Raising and Wine Making, but very little about the character of land adapted to the vines or the varieties suitable for different latitudes and localities; in fine, I am interested in the subject and wish to make an experiment, and will be obliged to any one who will give me some information on this head, or inform me whether living where I do (in the Mississippi Bottom in Arkansas, latitude 35°) grapes of any profitable kind can be raised. I shall expect to hear from you in your next issue.

Respectfully, &c., B.

REMARKS.—See the various articles on Grape Culture, in present number. All our native varieties will, doubtless, grow well with you, but the hills are better suited to vineyard purposes than valleys or bottoms.—Eds.

AGRICULTURAL FAIRS.

THIS is the season of Agricultural Fairs, and we hope they will be sustained and kept up with proper spirit throughout the South. Attend all your State and County Shows, with samples of the products of your plantations, farms, gardens, orchards, nurseries, stables, flocks, herds, poultry yards, &c., &c. Make careful comparisons with your neighbors, and see if you are not in many things a "little behind the times." If so, lose no time in catching up by procuring the best of everything pertaining to your favorite pursuit. Our Agricultural Societies are worthy of a generous support. They have conferred vast benefits on the country by the dissemination of improved farm stock, seeds, fruits, agricultural implements, labor-saving machinery, &c., and a taste for *improvement* and progress in rural life; and we who are most interested in such improvement and progress, must see that they do not languish for want of our assistance.

MR. AXT'S GRAPES—GEORGIA VINEYARDS—SOUTHERN WINE.

In our September number of the year 1853, (page 280) we briefly adverted to the beginning of what we must consider the Grape Growing and Wine making era of Georgia; and it now affords us peculiar pleasure to record the progress already made, and the future promise of the enterprise.

As we then stated, Mr. CHARLES AXT, (a native of the Vine Growing District of the Rhine,) profoundly impressed with the peculiar fitness of our soils and climate for the growth of the Grape and Wine making, eagerly sought to enlist our people in the enterprise. At first he made very slow progress. It was almost a new business—it had never been well tested—our people did not understand it, and Mr. AXT's then imperfect knowledge of our language, precluded anything like a free communication of the information which he evidently possessed. For two or three years, (from 1850 to 1853) he met with very little encouragement, and a man less sanguine and persevering, would have given up in despair. Not so, Mr. AXT, however—he knew he was right—and he pressed steadily onward.

The results of his efforts thus far, are most gratifying and encouraging. He has now quite a number of very promising young vineyards in Middle and Cherokee Georgia, Alabama and South Carolina; and it is only necessary that planters of taste and intelligence should be made aware of the main features of his system, and witness some of the results, to arouse among them a very general interest in the subject. With the view of imparting what we know of Mr. A.'s operations thus far, we will briefly state what we witnessed at the

VINEYARD OF DR. W. Q. ANDERSON.

This experimental vineyard of Dr. A., is located at his dwelling, 7 miles from Washington, Wilkes Co., Ga. It is on the summit of a slight elevation—the surface soil of a dry, gravelly nature, and the subsoil a red clay. In the winter of 1853, one-quarter of an acre was thoroughly *trenched*, two spades deep, and 500 cuttings of the Catawba Grape were planted in 7 foot rows, cuttings $3\frac{1}{2}$

feet apart in the rows. The cuttings of Mr. AXT are very long (18 to 24 inches) and the ground must be thoroughly broken and pulverized in order that they can be easily pushed down so deep that only one eye is left above the surface. Of the 500 cuttings first planted for Dr. ANDERSON, only about 140 survived the late frosts and drouth, and these 140 vines now constitute the Doctor's experimental vineyard.

We visited this vineyard on the 23d of August, in company with Mr. AXT, Hon. M. A. COOPER, of Cass, Mr. BACON, of Troup, and M. P. CALLOWAY, Esq., of Wilkes; and we are confident that the general feeling of the party was that of most agreeable surprise. The vines, which were trained to plain wooden horizontal supports, were literally laden with heavy, blushing clusters of the most beautiful and poetical of all fruits—the bloom-covered Grape—and the fine, strong, bearing-caness, huge, healthy leaves, and large, sound bunches, with no sign of rot or mildew, all proved conclusively the benefits of deep culture and proper training. We counted the number of clusters on several vines, and found an average of over 40 on each. According to the estimate of Mr. AXT, forty such clusters will produce at least a gallon of wine—so that the quarter acre of Dr. A., with scarce one-third of a fair stand of vines, will produce 140 gallons of wine the present season. The proper number of vines for an acre, on Mr. AXT's plan, is sixteen hundred; and that number of gallons (1600) of wine, may we think, be safely counted on from an acre of properly managed vines, the third year. With good care, the yield will increase thereafter, from year to year; and Mr. AXT has no hesitation in pledging himself to produce twenty-five hundred (2500) gallons of good wine from an acre of vines, the fifth year after planting. Estimating this wine at the lowest possible figure (\$1 per gallon) and allowing only one-half of Mr. AXT's estimate (1250 gallons) we have \$1250 for the production of one acre of ground, in one season—a result not often attained in the regular routine of Cotton and Corn planting!

We have no desire to put "too fine a point" upon this matter, or in the least degree to mislead our readers. Neither do we believe in any "royal roads" to fortune. We merely tell what we saw, and give our own impressions of the matter. We desire to see some portion of the capital, and much of the taste and skill of our country diverted from the old time-worn track that leads to the everlasting and omnipotent cotton-bag; and, to that end, stand ready to encourage any enterprise which will give our planters and their poor, worn lands more time for *rest and improvement*. The culture of the Grape and the making of Wine promises to do this; and also to prove a most efficient auxiliary to the cause of temperance, sobriety and good morals,* and it, therefore, has our heartiest good wishes and

*It is universally conceded that the inhabitants of wine making districts are remarkably free from the drunkenness so prevalent in countries where distilled alcoholic liquors are in common use; and the united testimony of physicians and physiologists goes to prove that *pure wine*, in moderate quantities, may in most cases, be drunk with positive benefit.

co-operation. We hope to live long enough to see the old "washed" and "gullied" hill-sides of Georgia and the neighboring States, yielding tons of luscious Grapes and hogheads of pure and invigorating Wine. The vine fairly revels in this climate—it adapts itself readily to almost every variety of soil, and with proper skill in planting and training will succeed anywhere in the South. All that is necessary is to start right—the main expense being the preparation of the ground. Mr. AXT is making arrangements to procure experienced vine-dressers to aid him in his business, and where sufficient encouragement is offered him by individuals or companies, he will assume full charge of their vineyards from the *trenching* of the ground to the bottling of the wine. His terms are by no means unreasonable, and those who desire to negotiate with him, may do so through the editors of this journal, or by addressing him at Washington, Wilkes County, Georgia.

Had we time and space, we would gladly go into more particular details of this very interesting subject; but we are obliged to leave it for the present, with the promise of returning to it hereafter, at an early day. The various articles on Grape culture in course of publication, will, we trust, have a tendency to arouse an increased interest in the enterprise. It only needs a fair investigation to convince all intelligent men of its success and profit.

P. S.—Since writing the above, we have had the pleasure of meeting Mr. AXT at the Atlanta Fair, where he exhibited two large baskets full of his unrivalled Catawba Grapes, and freely shared them with many visitors, who will gladly testify to their excellence. The new President of the Society, (Hon. MARK A. COOPER), in his opening Address, commended the enterprise to public attention in very strong terms; and the Committee on Fruit, as as will be seen elsewhere, signified their appreciation of Mr. A.'s efforts by a most favorable report, and the award of a Silver Pitcher.

Mr. AXT has now several hundred gallons of Catawba Wine in preparation, and connoisseurs will soon have an opportunity of comparing it with the new crop of Longworth, and other vintners, native and foreign. We shall carefully note the progress of this last stage of the enterprise, and inform our readers of the result.

UNITED STATES AGRICULTURAL SOCIETY.—EXHIBITION FOR 1855.

A GRAND EXHIBITION OF STOCK—*Horses, Cattle, Sheep and Swine*—open to competition to all the States of the Union, and to the British Provinces, will be held by the "United States Agricultural Society," in the city of Boston, on Tuesday, Wednesday, Thursday and Friday, October 23d, 24th, 25th and 26th.

Twenty thousand dollars have been guaranteed by patriotic gentlemen of Boston and its vicinity to defray the expenses; the city of Boston has generously granted to the Society for present use, a fine public square of fifty acres; and \$10,000 will be offered in premiums in the various departments.

The previous exhibitions of this Society—at Springfield, Mass., in 1853, and at Springfield, Ohio, in 1851—were eminently successful, and no efforts will be spared to make the present show, combining as it does, the four

great departments of farming stock, superior to its predecessors.

The Premium List, with the Rules of the Exhibition, will be forwarded to all who will address the President, or Secretary, at Boston, to that effect.

It is earnestly hoped that all breeders and owners of fine stock, will feel it to be a duty, as it certainly is for their interest to contribute to the show.

The List of Entries, Exhibitors and Award of Premiums and all the proceedings of the Exhibition will be published in the Journal of the Society, for 1855. Annual members of the Society, who desire to receive the Journal, should renew their subscriptions

MARSHAL P. WILDER, *President*.

WILLIAM S. KING, *Secretary*.

PLANTERS' CLUB OF HANCOCK COUNTY.

THE Annual Fair of this very spirited and enterprising Society will be held in *Sparta, Ga.*, on the 25th, 26th and 27th days of October, 1855.

Their exhibition at the same place, last year, was considered in the highest degree creditable and successful, and we have no doubt the forthcoming show will be still better. Let all who can, come up from "Old Hancock" and the neighboring counties, and bring samples of their skill and industry for comparison with the products of their neighbors.

GEORGIA WINE.

An old, experienced and (we think) not over-enthusiastic friend, expresses the following opinion, in which we perfectly coincide:

"I feel confident that you and I will live to drink plenty of Georgia Wine, of better quality than Ohio can ever produce; but we are in our feeble infancy yet. Let us, however, come to full strength, and we will see the now unfruitful hillsides produce a wine equal, if not superior, to the best Hungarian brands. The Georgian Wines will, in quality, be equal to the famous Muesher, Ruster, Carlowetzer, Tokay, and many others, as yet unknown in America."

To all of which we say "so mote it be," and may the time come speedily.

"YEAR BOOK OF AGRICULTURE."—See the advertisement of this forthcoming volume, in present number. It cannot fail to be a work of great interest and value, and we hope it will be widely circulated. Price \$1. Address CHILDS & PETERSON, Philadelphia, Pa.

THE VEREENA.—This beautiful flower is not as widely known or cultivated as it deserves. We were not aware, until we received the Catalogue of DEXTER SNOW, of Chicopee, Mass., that any one person in America was devoting to it his entire time and especial care. It seems that Mr. S. is doing so, however, and that his list embraces over *three hundred* of the choicest varieties. See his advertisement in present number.

FRUIT TREES, SHRUBS, ROSES, &c.—The season for planting is now approaching, and we need not tell our readers that trees grown in the South are far preferable to those from the North. See the different advertisements in our columns, and send your orders in time. The sooner trees are planted, after the fall of the leaf, the better.

GRASSES.

EDITORS SOUTHERN CULTIVATOR—Enclosed you will find a sprig of grass. Will you be so kind as to inform me, either by letter or through the columns of the *Cultivator*, what it is? I presume it is either Bermuda or South Carolina Wire Grass. Does it mature seed? If not, what danger would there be in planting it on an isolated pasture? Is it not a valuable grass for sheep pasture? Your attention to this matter will greatly oblige,

Yours most respectfully, J. W. W.

Cartersville, Ga., August, 1855.

THE sample of grass sent with the above letter is, we doubt not the common Bermuda, and *Cynodon dactylon* of botanists. It does not mature seed in the Southern States; but it is abundantly supplied with organs of reproduction, nevertheless, in its very extended stoloniferous roots. These are endowed with great tenacity of life; and in addition to their natural habit of spreading in all directions in the soil, the plow and the harrow aid in their wider distribution by carrying broken pieces of stolons and roots from one place to another. Most planters regard Bermuda grass as a nuisance to be avoided if possible. It is, however, the most reliable grass for stock we have yet seen in Georgia; and the writer is about to plant it on his farm for grazing purposes.

MR. AFFLECK highly commends it for making hay. It may grow tall enough on rich land for meadows, but on common upland in this State, it is too low and creeping to cut for hay. A liberal use of manure will go far to remedy this defect. It has an important advantage over "Crab grass" in not requiring the ground to be plowed every year to obtain a fair crop. With proper care to keep up the fertility of the soil, a luxuriant Bermuda pasture may be indefinitely prolonged without breaking the sward. For directions for planting, see an article from the pen of Mr. AFFLECK, in the April number, present volume, of this journal.

EDITORS SOUTHERN CULTIVATOR—I enclose to you some seed and a sprig of grass which came up in my yard (from grass that came from New York enclosing crockery-ware). It is a beautiful yard grass; and I think, if planted on wet soil, would make a good pasture, as cattle are very fond of it. If you have leisure to attend to it, please let me know its name and qualities and whether it is annual or biennial, and you will greatly oblige one who appreciates your zeal in agricultural improvement. An answer through the *Cultivator* will oblige

A SUBSCRIBER.

Campbellton, Miss., August, 1855.

WE are unable at present to give the botanical name of the grass sent in the letter above copied. It may have been imported from England or France into New York around crockery, as it came to Mississippi. We have a collection of twenty eight genera, and sixty-two species of the most common grasses grown in the Northern States, and Great Britain, but the specimen before us differs from them all. The organs of fructification in many grasses are so small and obscure that a single sample, folded and rubbed in a letter, is not sufficient to enable one to detect, even with a good magnifying glass, its true species and character. No seed came in the letter, or in the glumes of

the plant. As its stem is but a few inches in length, it would seem to be too small to yield a large crop alone. With other grasses, it may be valuable.

LODGEON remarks (see page 886) that "the best grass pastures, those which are most productive and nutritive, are such as are found in countries that have least cold in winter, and no excess of heat in summer. Ireland, Britain and a part of Holland and Denmark, may equal or surpass any countries in the world in this respect; but in every zone where there are high mountains, there are certain positions between the base and summit, where from the equability of the temperature, turf may be found equal to that in marine islands. It is a singular circumstance with regard to grasses, that in the greater part of North America, the sorts that grow naturally on the plains are almost all annuals, and consequently with the first frost they die, and the ground remains naked until a fresh crop rises from the self-sown seeds the next spring. Nearly the same thing may be said of Poland and Russia, with the exception of the banks of rivers, and the mountains."

Perennial grasses, whether for grazing or hay, are vastly better than the annuals. It is only on large prairies, plains, or other commons, that much depastured annual grasses are able to maintain themselves without cultivation. Without tillage, a pasture or meadow of "Crab-grass," or "Crow-foot" would be short lived. COL. STANFORD evinced the sagacity of a shrewd farmer when he fixed his attention upon the perennial character of his "Wild grass;" and his friend, MR. E. SRRONG, also commends it for "growing finely through the winter" in the August number of the *Cultivator*. MISS KENT gives the following glowing description of the Tall Oat Grass, in LODGEON'S *Magazine of Natural History*:—"I have seen it six feet high, with leaves two feet long, and more than one inch wide, with its panicle of flowers gently drooping to one side, at least 18 inches in length, and so finely polished that, but for their green color, we might think it was composed of silver oats. Yet it is *not* green; neither is it white, nor golden color, nor purple, but it is a union of all these; it is the offspring of silver and of gold, of the amethyst and the emerald. It is indeed very variable; but in the full pride of its beauty, this grass is truly magnificent."

Prudent men will be careful not to expect too much of any one grass. It is for a wise purpose that nature furnishes a great variety of herbage to all graminiferous animals. Beside the grasses, sheep eat some 200 species of plants. No two yield food precisely alike. Hence, peas, beans, lupins, clover, turnips, cabbages, carrots, beets, pumpkins, and all the cereal grasses, are fed to domestic animals with success. What mixture of grasses will form the best permanent pasture in Georgia, in the latitude and climate of Athens, is information which we should gladly receive? Can any indigenous or acclimated Blue grass maintain itself in conjunction with the Bermuda? Will not the latter "run out" every competitor growing side by side with it? Any suggestions on this subject by such as have had experience in forming permanent pastures, or meadows, will gratify the wishes of many besides the writer.

If the Crockery grass of our friend keeps green in winter like Oat grass and Blue grass, he may consider it perennial; but if the frost kills it in the autumn, it is an annual. L.

CROPS IN CHEROKEE, GEORGIA.—A friend, writing from Rome, Ga., under date of August 21st, says:

"Our wheat crop is pouring in rapidly, and peace and plenty is the order of the day, with large anticipations for the future. Corn never better. Cotton looks well—a good average—rather too much rain for cotton. Wheat has been sold in our streets at 75c.; but has now gone back to \$1 10, notwithstanding the large amount offering. Everything has done well with me this year. My Irish potatoe crop has been extraordinary for me, but I fear not for others, generally."

NEW YORK STATE FAIR.—The Fifteenth Fair of this flourishing Society will be held in *Elmira*, from the 2d to 5th of this month. We are under especial obligations to the Corresponding Secretary, B. P. JOHNSON, Esq., for a kind invitation to attend, which we are reluctantly obliged to decline, owing to the pressure of other engagements.

AMERICAN LINEN.—The *Providence Journal* mentions having seen in that city some specimens of flax in the stages of manufacture, from the coarse raw material dressed without rotting, to the yarn fine enough to spin No. 100, and the woven cloth handsomely finished and beautifully bleached. Twine, thread and other manufactures of flax were also exhibited. The *Scientific American* believes this to be the first fine linen cloth and thread which have been manufactured in this country; linen twine and shoemakers' coarse thread have been extensively manufactured, but not a single yard of American linen has been exhibited at any of our fairs. By the new process of bleaching and spinning, the manufactured article can be afforded at much reduced prices.

TENNESSEE WHEAT.—It is stated that large quantities of Tennessee wheat are this season, for the first time, being sent to the New York market. At Murfreesboro', where some thousands of bushels are in store ready for transportation, it is represented as being worth 80 cents per bushel and the cost of taking it to New York is 50 cents. Wheat is sold in the latter market at \$2 10 per bushel, by which it would appear that the New York merchant or shipper pockets a profit of 80 cents on every bushel of Tennessee wheat he sells.

POULTRY CHOLERA, OR DISTEMPER.—Messrs. COULTER & SCOOTER, of the *Edgefield Advertiser*, offer the following, which they pronounce an infallible remedy for the chicken distemper:—"Slit the skin on the back of the head and open it with the knife around the skull, and fill the pocket thus made, with half a teaspoonful of fine salt."

WEST TENNESSEE.—The Division Fair of West Tennessee, will be held at *Jackson*, on the 23d of October.

THE RICE HARVEST.—We learn that the planters on Pon Pon are already deep in their harvesting operations. We presume it is the case elsewhere, though we have not express information. A specimen of rice heads and stalks gathered from the plantation of Mr. John R. Matthews, Pon Pon, affords a very favorable promise of the new crop. Two of the stalks measure more than six feet, and one of the heads is fifteen and a half inches in length. The produce of this year promises to be a good average, and if the weather continues favorable during the period of harvesting, the quality of the rice will be excellent.—*Charleston Mercury*, Aug. 29.

SHORT HORN DURHAMS.—Mr. R. A. Alexander, of Woodford, Ky., has visited all the herds of short-horn cattle in England lately, and shipped for this country 48 of the best animals selected therefrom, as also 22 South Down Sheep. He is said to be the largest importer of short-horn cattle in America, and every year he spends several months in England, to attend the Fairs there and purchase the best animals.

Horticultural Department.

WORK FOR THE MONTH—(OCTOBER)

[OCTOBER derives its name from the Latin word *octo*, eight, indicating the place it held in the Roman Calendar. To the Jews it was known as *Bul*, signifying decay, as in the fall of the leaf, (1 Kings vi. 38,) or *Marchesvan*, as it was called after the captivity; the second month of their civil and eighth of their sacred year. The Saxons called it *Teotha monath*, or *Tenth-month*, and also *Winter-fylthh* *Winter-beginning*]

THE PLANTATION.

Cotton Picking will now require almost the entire force of the plantation. Press forward vigorously, and endeavor to get your crop ginned, packed and ready for market before the coming on of winter rains and bad roads. Let every operation connected with the putting up of Cotton be performed in the most careful manner, as the market value is often materially influenced by seemingly slight defects in management. The premium bales at one of our Augusta Fairs were presented by *alady*, who owed her success entirely to careful personal supervision of the ginning and picking of her Cotton. The skillful handling and proper putting up, even of inferior grades, will be found to "pay" in the long run.

Corn.—Gather your Corn, and put away securely in airy, tight-roofed and well looked cribs. Do not be too lavish of it in feeding—do not waste a grain, or fling it out carelessly to your stock, because this happens to be a great Corn year. Husband it carefully—feed generously and plentifully, but not thoughtlessly or wastefully. Next year, we may be visited by another *long drouth*. Save carefully all your surplus Corn for that contingency. In this connection, we cannot too strongly urge the economy of using machines like the "Little Giant" and Rowe's Mill for cracking both corn and cob. (See account of these machines elsewhere.)

Cow Peas.—Gather and store away all these as soon as possible. Sack your seed peas, and keep in a dry, airy place.

Sweet Potatoes.—This crop may be dug the latter part of this month, or as soon as the vines are wilted by the first frost. A contemporary gives us the following indication of the ripeness or maturity of the Sweet Potato:—"Pull several potatoes from different parts of your patch, break them and give them time to dry, and if the fresh broken parts dry over perfectly white, the potato is ripe and should be dug. But if of a darkish hue, the potato is not ripe and should be left to ripen. If dug when ripe they will keep, if not they will rot." Put up your Potatoes in small "barks" (25 to 50 bushels) and reject all cut or bruised roots. See, also, that they are perfectly dry before

banking. Let the foundation of the banks be 12 or 18 inches higher than the surrounding surface, on an elevation, where water will not settle, or stand.

Egyptian and other Winter Oats, Rye, Barley, Clover, Lucerne, and other hardy grasses should be sown at once. Plow deep, pulverize finely and manure heavily for all these crops, if you desire proper remuneration for your labor.

Hay.—Many varieties of native grass are yet worth gathering, to eke out scanty winter supplies. *Pindar* and *Sweet Potato vines* are good fodder, when properly cured and stored away.

Turnips.—It is late for field crops of Turnips; but, if your early sowings have failed, *try again now.* We have known good crops made after the first of October. Bring your growing Turnips to a proper stand, and keep the ground clean and open.

Pumpkins should be gathered as soon as ripe, and stored on well-aired scaffolds or tiers of rails, one above the other, so far apart that the layers of pumpkins cannot touch or rest upon each other. Put up in this way, with a slight covering or protection from frost they will keep nearly all winter. There should be a water tight roof over the scaffolds, and straw may be used as a protection from frost. Placed in a heap or pile, pumpkins soon decay and become worthless. Before feeding to your stock they should be boiled up with a sprinkling of meal or bran.

Hedges of the Osage Orange, Cherokee and Macartney Rose, Honey Locust, Evergreen Thorn, (Crataegus Pyracantha) Pyrus Japonica, &c., &c., may be set out the latter part of this month, or as soon as the leaves of deciduous trees fall. The proper preparation of the ground for Hedges will be treated of in our next.

THE GARDEN.

Sow *Cabbage, Turnips, Parsnips, Lettuce, Carrots, Radishes, &c., &c.* Haul plenty of manure on your garden, have it well spaded, burying under all enriching animal or vegetable matter. Transplant *Brocoli, Cabbages, Celery, "Collards," &c.* Dress and manure your *Asparagus* beds, not forgetting to give them a liberal top-dressing of salt, before spring. Save all old bones, soap-suds, dead leaves, decaying vegetables, &c., &c., and make up into compost heaps for future use. Plow and subsoil your ground for the planting of young orchards, directions for which will be given our November number.

THE STRAWBERRY PATCH.

The best soil for this delicious fruit is a sandy or even a gravelly loam, moist, and rich in vegetable manure. An excellent compost for an acre of ground would be 60 bushels of leafmould from the woods, 20 bushels of leached ashes, 5 bushels lime, and 3 or 4 quarts of salt. Mix thoroughly, let it stand 2 or 3 days, scatter broadcast and plow in. Then harrow or rake the surface, making it fine and set your plants in rows 3 feet apart, and 1 foot to 18 inches in the row. After the plants become well rooted, cover the whole ground with partly decomposed leaves from the forest, leaving nothing exposed but the leaves and fruit stalks of the plants. See "Notes on Strawberries," in our August number.

FINE APPLES AND PEARS.

We are indebted to that very zealous pomologist, J. VAN BUREN, Esq., of Clarksville, Ga., for a box containing the following and several other varieties of Apples:

SOUTHERN.—*Julien*, first rate, ripens 1st to 15th of August. *Habersham*, good, ripe 15th to last of July. *Toccoa*, or Muskmelon, first rate, with a sprightly flavor, ripens middle to last of August. *Chestatee*, late, good keeper, cooking apple, ripens 1st to 15th September. *Ray's Sweet*, good, ripens 15th to last of August. The *Cane Creek Sweet, Summer Sweet*, and several other varieties, were so badly decayed that we were unable to form an opinion of their quality.

NORTHERN.—The following Northern varieties (and nearly all others from that region,) ripen prematurely in this climate, and will not keep any length of time. Indeed, many of them, with Mr. VAN BUREN and ourselves, rot on the tree, and seldom produce a perfect specimen:—*Baldwin, Hubbardston Nonsuch, Dutch Mignonne, Roxbury Russell, &c.*

From this it will appear plain to all intelligent Fruit Growers that, if we wish *late keeping apples*, we must plant our own native *Southern Seedlings*, such as the *Shockley, Summerour, Cullasaga, Nickajack, &c.*, all of which have been figured and described in these pages by Mr. VAN BUREN. A few trees of those rare new sorts of apple may be obtained from that gentleman and others, who intend propagating largely to supply the demand next season.

The box also contained a few *Bartlett Pears*, of fine size and delicious flavor. They were over ripe when received, but the melting, sugary richness was still there, and after the first taste, nothing could save the remainder from instant "destruction."

In regard to Fruit prospects in Habersham, Mr. VAN BUREN gives us the following cheering intelligence:

"We are abounding in every species of fruit. Our trees are so tired with holding up such enormous loads that many of them are breaking down. Apples are in such clusters and so crowded that they are quarrelling and pushing one another off the trees! I never saw so great a quantity, nor of so fine and fair quality as we have this season.

"When the time arrives I will send you some specimens of our Winter fruit."

NATIVE GRAPES—LETTER FROM DR. McDONNALD.

EDITORS SOUTHERN CULTIVATOR.—In your August number I read the communication signed "J. S. G." requesting information with regard to the cultivation of the Grape and of the kinds best adapted to the South, with an editorial referring directly to me, requesting that I would respond to the wishes of "our correspondent and many others who desire information on this subject." I may not refuse the call, and will, with due brevity, afford all necessary information (omitting for the present the culture of the Grape). I will confine my remarks to those species of the Grape which have been most generally under my observation. This would be best understood by stating the kind cultivated in my vineyard, to wit:

The *Isabella*, of which I have two or three varieties,

yields an abundance of beautiful fruit, when they do not rot. This year one-half of the crop was destroyed by that disease. Whether the rot is caused by insects or simply by adverse changes in the weather, is unknown; but the fact is so, that vines adjoining each other in the same row will be affected differently—the one will have its fruit destroyed, and the other not. Again, sometimes the branches on one side of the same vine will have its fruit rotted and the fruit on the opposite branches continue sound—in other cases, one part of a bunch will rot and the rest of the grains on the same bunch will remain perfect to maturity. All this looks like the work of insects, and not to the effect of certain soils or even changes of weather, although the last may be necessary to the development of certain animalcula and their propagation. The Isabella makes a fine claret.

The *Warren Grape* is a much more luxuriant grower and a greater bearer than the Isabella, the bunches are large and the berries of medium size, with little or no pulp. It make a fine wine, the flavor being between Port and Sherry; but it also suffers from the rot. The rot occurred in the *Warren Grape* on the 10th of June, and passed off in five or six days with the loss of a fourth or perhaps a third of its fruit, whilst the Isabella was but slightly touched; and yet later on the 16th of July, it recurred in the Isabella, and swept off one-half of its fruit, but did not reappear in the *Warren*.

The *Burgundy Grape* bears the largest bunches of the three, and the fruit is the sweetest of all these grapes. The grains are of medium size, free of pulp, the bunches sometimes weighing a pound. It does not rot, but is very much injured by bees and wasps, the skin being so thin that they prefer it to all others. It does not have as much fruit as the *Warren*, and requires four years to come into bearing. It makes a fine rich wine, quite superior to the *Warren*.

The *Blue Grape*, or, as it has been termed by some, the "Black July," is a poor bearer, and, though it does not rot, it is very much destroyed by birds. It makes a wine similar to Port. It is a native of North Carolina.

I have two varieties of *Rose Grapes*. One has been called the *Bland's Madeira*, but whether that is its proper name I have not been able to satisfy myself, as hitherto I paid but little attention to it; but this year I have noticed that it is an abundant bearer of large berries, pale red and fair sized bunches, free from rot. I have not made wine of it, but will do so this year.

The *Catawba*, I am little acquainted with. Among a variety of native vines from North Carolina, I imported a *Catawba* from Dr. WELLER. Those *Catawba* vines are now in full bearing and free from rot, and are identical in the appearance of the wood, stalk and leaf with the 1000 vines which I obtained (through the polite attention of R. BUCHANAN, Esq., of Cincinnati) from the Nursery of KELLY, EVANS & Co., of Cincinnati, Ohio. They are free from rot with me, but they occasionally rot in Ohio.

The *Scuppernon* vines occupy a separate vineyard of four or five acres, planted ten by twenty feet. They are not liable to spring frosts, as they bloom very late, but a cold change will at the early formation of fruit cause the grains to shed off. The crop of these will be very light this year, in consequence of the cool nights in June. The fruit of this grape has a peculiar rich aroma, but it will not make a good wine without the addition of sugar. The wine, when thus made, is of the quality of Champagne.

The *Herbemont*, it seems, is amongst my collection, but its culture was not extended, as it came to me from a Nursery in New York, under the name of "Guignard," and again as the "Red Hamburg." The culture was not extended as the fruit was not as sweet as others; some few vines, however, got scattered in the vineyard, and the originals continued to grow, when a friend of mine who

knew the *Herbemont* enlightened me as to its real name. There is more fruit on one of those vines than on any other in the vineyard, and not a particle of rot about them. I have Mr. N. LONGWORTH's authority for saying that it makes a pleasant wine like the Spanish *Manzanilla*.

Now that my basket of Grapes has been freely presented to your "correspondent and others," I think that they can make a fair selection. For myself, I must confess that I like them all. And although I have a great many French Grape Vines in bearing, I would not exchange the most indifferent of the former for the best of the latter, for open culture.

The culture of the Grape and the making of Wines in the primitive style, without any addition of foreign matter to the pure juice, may form another article, when more at leisure. Respectfully, &c.

JAMES C. W. McDONNALL, M.D.

Woodward, S. C., August, 1855.

A NEW RHODODENDRON.

EDITORS SOUTHERN CULTIVATOR—I send you a drawing of a flowering evergreen shrub, recently discovered on some of the mountains in Macon county, North Carolina, which, in point of beauty and magnificence, is second only to *Magnolia Grandiflora*.

It is a nameless and undescribed variety of *Rhododendron*; there is, however, a traditionary account of its discovery some 60 years since, by a botanist by the name of FRASER, then exploring this country, under the patronage of the then Emperor Paul, of Russia. FRASER died suddenly on his return to St. Petersburg, which, probably, is the cause of an account of it never having been published.

The annual burning of the forests in which it grows, usually destroys it so that it is extremely difficult to find a specimen of it. Some four or five years since, however, S. McDOWELL, Esq., of Franklin, Macon county, North Carolina, re-discovered this truly gorgeous plant, and for a year or two past has been engaged in propagating them, by removing the plants to his garden near that place. The shrub grows to the height of 4 or 5 feet and is of easy cultivation; the foliage is larger and more rich than that of the Pontic varieties with which we have compared it; the panicles of flowers, too, are larger and more brilliant in color. Mr. McDOWELL sent us a box of the flowers in June, which we compared with those of *Ponticum*, which we fortunately then had in bloom, and which were inferior to it in all respects. The foliage also differs from it, being larger and heavier, having golden yellow foot stalks and mid-rib, the peduncles to the flowers being likewise of the same color, whilst those of *Ponticum* are green; the under-surface of the leaves are nearly white and of a velvety texture, differing from *R. Maximum* and *R. Catawbiense* in not becoming ferruginous. No native American flower can exceed it in habit and beauty, and it must become a popular acquisition to the shrubbery and flower garden, being sufficiently hardy to endure any climate. Its color is a bright crimson approaching towards scarlet; the panicles are composed of a large number of flowers, from 20 to 30, forming a conical mass nearly as large as a man's head; the contrast between these and its dark-green foliage is very rich and magnificent, and can only be conceived of by being seen.

The labors of Mr. McDOWELL have been both arduous and unremitting in transferring these plants to his grounds, as they have only been found on the tops of the highest and most inaccessible mountains, the only approach being on foot; he has employed men to bring them

some 6 or 7 miles on their shoulders, it being the only mode of conveyance practicable. Specimens of flowers and leaves have been sent to many of our most celebrated Botanists and cultivators of Rhododendrons, and, as yet, all have failed to identify it with any previously known, and it will probably prove to be a new species.

We hope the industry and labors of Mr. McDOWELL may meet with a suitable reward in the sale of his noble plant; and those who procure them, we will guarantee, will never regret having done so. J. VAN BUREN.

Clarksville, Ga., August, 1855.

N.B.—The drawing I send you is a fac simile of a medium sized panicle of flowers sent me by Mr. McDOWELL. J. V. B.

REPORT OF THE COMMITTEE ON FRUIT TREES, HEDGE PLANTS AND FRUITS, &C., AT THE ATLANTA FAIR, SEPT. 11--14, 1855.

Your Committee congratulate the Society upon the steady progress which the cultivation of Fruits has made within a few years past. With the disadvantages of destructive frosts and uncongenial seasons, this exhibition has excelled all preceding ones, and due interest has been awakened which will soon render us independent of all parts of the world. A proper and correct knowledge of Fruits and their nomenclature, habits of growth and proper culture, will testify to the world, in a short time, that our region will furnish superior advantages, in fruit culture, to any other section of the globe; and it is a pleasure to your Committee to communicate these gratifying facts.

Your Committee take great pleasure in bringing to the notice of the Southern people the very successful operations of Mr. Charles Axt, of Washington, Georgia, in the cultivation of the Catawba Grape, for wine purposes. Mr. Axt has labored under many disadvantages, and in the face of opposition and discouraging circumstances, has produced on exhibition here, the most superior specimens of this grape ever seen in Georgia, and we doubt if they have been excelled any where in the United States; thereby proving that, with skill and proper culture, we have soil and climate admirably adapted to the profitable production of this valuable variety. A branch of enterprise will inevitably be established by the crowning success of Mr. A.'s experiments, which will add incalculably to the wealth, comfort and morals of our people, and in view of these great results, the Committee recommend that a special premium of a Silver Pitcher of the value of twenty-five dollars be presented to Mr. Axt, thereby endorsing his extraordinary exertions and testifying to his success.

We would notice a collection of beautiful Pears, contributed by Mr. A. H. Ernst, of Cincinnati, Ohio, through the kindness of Mr. Thurmond, of Atlanta. They exhibit the perfection to which this superior fruit has been brought, and presenting over sixty varieties, show that the attention which is now excited in behalf of pear-culture will lead to very gratifying results in the South, which we believe is the true home of this delicious orchard product.

Mr. Harry Camp, of Covington, Ga., presented Rhodes' Pearmain Apple, produced by Col. Mercer Rhodes, of Newton Co., and the Royal Pearmain, two very superior varieties, and the Committee respectfully suggest that he be awarded a special premium of \$10.

Dr. Moyer, of Talbotton, Ga., presented a very beautiful and superior Seedling Apple, for a name, and we have designated it "*Mary Moyer*."

Col. A. G. Summer, of Alston, So. Ca., presented for exhibition a remarkably beautiful and superior Winter

Apple, known as the "*Hoover*"—a native of Lexington District, So. Ca.; which we suggest should be presented as a competitor for the prize offered next year for the best new Southern Seedling Apple.

A. G. SUMMER, Chairman.

[For awards of Prizes in this department, see Premium List, to be published in our next number.]

TRAINING OF TREES.—The editor of the *Horticultural Review*, says:

"Trees with low heads do bear sooner and better, and will bear longer, than whip stalks and bean poles. In our prairies, low headed trees are the only ones that can hold up their heads, or hold on their fruit. They are naturally shaped *Fruit Bearers*, but they are miserably unpopular with that class of purchasers who 'know more about trees than the men who raise them.' This is a most important subject; and fruit growers will never repent but *once*, if they prune their trees up high. Like most tyros we began so, too; and it has inflicted one perpetual sorrow upon us. The low tree is healthier, not subject to affections of the bark or insects, not injured by winds, the fruit is easier gathered; in fact, every reason is in favor of low growth. We now try to form a head not higher than three feet from the ground, for apples, letting the branches grow out."

WHEAT AND WEVIL.—At this particular time, when the united hosts of speculators have combined to rob the honest farmer of the just earnings of his labor, it may not be generally known that wheat may be threshed out, cleaned, put away in the barn, and given a pretty thick covering of pine leaves (more commonly known as pine tags) and it will remain in this state for years, entirely exempt from that great enemy, Wevil. Of course the wheat should be bulked in a dry state, and after covering with the pine tags, it will be kept cool and free from danger.

The above information was obtained some years since from Mr. James B. Cocke, of Prince George county, Va., an experienced farmer, who, by means of the pine tags, as above, has been enabled to keep his crop of wheat in a complete state of preservation for years; this being also the experience of a

SURREY FARMER,

[in *South Side Democrat*.]

THE TOMATO.—T. Jefferson Randolph, in an address before the Agricultural Society of Albermarle county, Va., lately delivered, stated that Mr. Jefferson could recollect when the tomato was cultivated as an ornament to the flower gardens, called love apple, and deemed poisonous. It was eaten by one individual, a foreigner, whose peculiar constitution, or the formation of whose stomach was supposed to resist its deleterious effects!

PEACHES FROM CUTTINGS.—A gentleman of this city has presented us with a sample of peaches, raised in his garden from cuttings planted in the autumn of 1851. They are of large size and remarkably fine flavor, and determine, most satisfactorily, a matter which has been disputed, that peaches can be raised from cuttings.—*Charleston Mercury*, Aug. 9, '55.

PROFIT OF UNDERDRAINING.—Mr. Wm. Chamberlain, of Lower Red Hook, N. Y., drained 25 acres of land, at an expense of \$60 per acre, and the first three crops paid the whole expense, including cost of cultivation. He may then hereafter look for a profit of \$20 per acre on each crop. Last season part of this ground yielded 75 bushels of corn, and a part 300 bushels of potatoes, while on adjacent undrained fields the crops were nearly ruined by the drought.

SICKLY WOMEN.

THERE is a chapter in Miss Beecher's new work (Letter to the People on Health and Happiness,) that presents the "Statistics of Female Health." No one can read it without being amazed at the fearful progress of disease among the women of our country. Of late years, public attention has been earnestly called to this subject and numerous facts, calculated to show the havoc, which is spreading the ills of suffering and death throughout our households, have been sternly arrayed before the American people. But we have seen nothing which conveyed so strong an impression as this statistical table.

Miss Beecher has taken great pains by travel, correspondence and other means to familiarize herself with this subject and to obtain reliable data concerning its facts. The results indicate, that wherever an investigation was had, not more than one-fourteenth of American Women are strong and perfectly healthy. This is the maximum under the most favorable circumstances, which came under observation. The "delicate and diseased" are sometimes nine in ten and "habitual invalids present a frightful frequency." The author gives the results of her personal observation. She has "nine married sisters and sisters-in-law; all of them are either delicate or invalids except two." She has "fourteen married female cousins and not one of them but is either delicate, often ailing or an invalid." "In my wide circle of friends and acquaintance," says she, "all over the land out of my family circle, the same impression is made. In Boston, I cannot remember but one married female friend, who is perfectly healthy. In Hartford, Conn., I can think of only one; in New Haven, Brooklyn, New York City and Cincinnati, but one." She states further, that in "my immense circle of friends and acquaintances all over the Union, so many as ten ladies born in this century and country" cannot be recalled, who are perfectly sound, healthy and vigorous.

Miss Beecher makes some very sensible remarks on the causes of this serious decline in the health of American Women. She thinks, that the larger portion of our wives and mothers have too many cares and burdens. There is too heavy a tax on their nerves and brains. A great deal of mischief is also done by improper habits of living—by the want of air and exercise—by pernicious dressing and other false social customs. Her observations here are very forcible. If others are free from perplexing cares and duties, they indulge themselves too much and thus exhaust their strength in sheer indolence.

We are glad that this work has been published. It is extremely difficult to awaken any effective degree of attention to this important matter, but the public mind must be operated on until its sensibilities are thoroughly aroused to the magnitude of the evil. Three things ought to be done at once, viz:

First. The false habit of overworking and closely confining girls for so many hours in school ought to be broken down.

Second. Much more attention ought to be given to diet and dress.

Third. Exercise should be made agreeable, inspiring and a regular part of every day life. What we especially and particularly want is more for the muscles to do and less for the nerves, and to do it, we ought to make recreation and amusement as rational as possible. The larger part of our pleasures are slowly suicidal. We go into society just at the time and just in the way we ought not to go; and we eat, drink and sleep pretty much as if eating, drinking and sleeping were tributary to death instead of life.—*Southern Times*.

THE HAIR.—Dr. Cazenoe, of the Hospital of St. Louis, Paris, has published a valuable paper on the hair, in which he says the most healthy mode of dressing the hair of females, especially young ones, is to let it be as loose as possible, or arranged in large bands, so as to allow the air to pass through them. It is a great mistake to plat the hair of children under eleven or twelve years of age. The process of plating more or less strains the hairs in their roots; pulling them tight tends to deprive them of their requisite supply of nutriment, and checks their growth. The hair of girls should also not be cut nor thinned, but merely shortened.

INSECT PESTS—CAN THEY BE DESTROYED?

EDITORS SOUTHERN CULTIVATOR:—You have shown yourselves so willing and competent to assist, through the columns of the *Cultivator*, all applicants for instruction and advice, that I am encouraged to ask your friendly aid in the same way. For two years I have devoted my leisure time to my garden and fruit trees, and though confined to narrow limits in both time and space, I have engaged in this employment with the greatest interest and enthusiasm. I have, however, met with one difficulty which has greatly disheartened me, and well nigh defeated my efforts.

That difficulty has been the ravages of the *insect tribes*, against which I have not been able to find an effectual remedy, and I have perseveringly tried a great many. First and worst has been various species of the *aphis*. I could find you a dozen different sorts of them in the compass of my small garden. My cabbages, winter and spring, young and old, have been actually destroyed by them. So were my watermelon vines, both the early and the late planted, and much of my okra. My only quince tree has had every leaf on it blasted by a species peculiar to itself. They attacked my plum and apple trees, and grape vines. I have applied salt, ashes, ley, soot, snuff, tobacco water, and guano water, and have found it easy to destroy multitudes; but they multiply with such rapidity as to baffle my efforts. If two or three escape, they are as numerous after twenty-four hours as before. Attached to the under side of the leaves, too, it is very difficult to reach them with any means at my command. Indeed, I could do nothing with those which attacked my watermelon vines. They seem to flourish equally well in hot or cold weather, and were as numerous on my winter cabbage in December and January, as they have been in March and April.

My *Tomatoes* are attacked by a worm which appeared this year in June; it is a green worm, with diagonal stripes of white on the sides, and a stiff horn on the rump, curving downwards. It sometimes comes in great numbers and eats the young branches, leaves, blossoms, and fruit, and in a little while will strip a plantation of tomatoes naked and bare. When full grown it is as large as my finger. I have discovered no remedy for it but to pick it off and kill it. It usually feeds from sun down to sun up, and, being very nearly the color of the tomatoes, can be found only by a close search.

My *Muskmelons*, of all sorts, are always ruined in August and the last of July by a green worm, an inch or an inch and a quarter long, which eats into the melon and feasts on the delicious treat I intended for myself.

Many of my *Strawberry plants* were killed, and all of them injured in the winter and spring, by a worm which burrowed a hole just at the root, and seemed to live there and eat the roots. This rascal I have never seen, as he committed his depredations late at night.

The: : es and ends of the twigs of my fine plum trees

are eaten by *something*, I know not what. I have never been able to find it, day or night, and know it only by its ruinous effects.

Is there any means to prevent rose bushes and pomegranate trees from throwing up suckers?

How can the Paradise Apple be best propagated? What would you do with a valuable plum or apple tree which does not grow thrifflily, but has no apparent disease and is in a good soil?

I have been attempting to train an apple tree to a trellise, but the boughs which I have tied down for this purpose *will not* grow at their extremity, and *will* throw up shoots at every bud, which after innumerable rubbings and pinchings persevere with indomitable pertinacity in growing upwards. What can I do with it?

QUARO.

Selma, Ala., Sept., 1855.

REMARKS.—The case of our correspondent is a hard one, indeed—almost hopeless, it appears to us. Perhaps our friend, R. B., of Rome, Ga., may be able to prescribe an effectual dose for the maurauding herds QUARO complains of. Will R. B. give us his camphor-water remedy, or other suggestions?

DOWNING says the following mixture will destroy the *wooly aphid*.—Three-quarters ($\frac{3}{4}$) of an ounce of sulphuric acid, mixed with seven and a half ounces ($7\frac{1}{2}$ oz.) of water. It should be rubbed into the parts of the tree affected, by means of a piece of rag, tied to a stick, the operator taking care not to let it touch his hands or clothes. A strong decoction of Aloes, it is said, will also drive away almost every variety of insect. These, with the forthcoming recipes of R. B., and the salt, ashes, ley, soot, snuff, tobacco-water, guano-water, &c., of QUARO ought to kill off some of them. Let them be tried, at all events. *Paradise stocks*, for the apple, may be obtained from all large Nurseries—propagate the Paradise by layers. We do not know any method of preventing the Rose and Pomegranate from suckering—it seems to be natural to most varieties of these plants. Dig in around your Plum or Apple tree a mixture of lime, ashes, muck and stable manure, and then mulch it with forest leaves or straw. If that does not make it grow, it should be “cut down and cast into the fire.” We see no reason for training trees to trellises or espaliers, in this climate. Let them grow as standards, branching out near the ground.—EDS.

MURRAIN IN CATTLE—A REMEDY.

EDITORS SOUTHERN CULTIVATOR—For several years I have been a reader of the *Southern Cultivator*. I will say that I have, from no other source, received so much valuable information as I have from the pages of the *Cultivator*. But upon the subject of Murrain in Cattle, I have never found a remedy or a preventive. This is a malady that kills our cattle by scores annually, and if a remedy can be found it will be of great value. I do not know that I have a remedy, but I believe so. I will give it for the benefit of all that may have Murrain amongst their stock, who may wish to try it. And if their efforts are attended with alike success they will never regret it. When you first discover the animal is attacked, which is not difficult to determine, lose no time in preparing a drench. The drench is one quart of the juice of Jamestown weed, and one teaspoonful of saltpetre. This is enough for a grown cow or ox—for

small cattle $\frac{1}{8}$ to $\frac{1}{2}$ the quantity is sufficient. If administered in time, 9 out of 10 will get well.

I see that much is said about the Hollow Horn in Cattle. I think some of the remedies much worse than the disease. For instance, the plan of boring a gimlet or augur hole in the horn of a cow is a great evil, and a dangerous practice. I am of the opinion, Messrs. Editors, that all the cases of hollow horn that occur are caused by exposure to the rains and sleets of winter and early spring, and for the want of plenty of food—they have the hollow belly, and hence the hollow horn necessarily ensues, as well as the hollow tail. If the following rules are observed, the hollow horn will never be found:

1st. Let no man keep a greater number of cattle than he can keep in good order during the winter and spring, say until the middle of April.

2d. protect them from the rains and cold winds.

3d. Cover their horns well with tar every two weeks, and my experience is that the hollow horn never makes a victim of any of my cattle. But I do not wonder, Messrs. Editors, that men's stock die with hollow horn, hollow tail, &c., when they have nothing to eat but a few shucks thrown out in the mud—no stables. The wonder with me is that they do not all die of hollow belly, hollow horn, and hollow tail. I know one man that has 27 milch cows and does not get as much milk and butter as 4 good cows will yield, properly attended to, because they are all of the *limber tail stock*. Respectfully yours, &c.

L. G. W.

Top of the Hill, Sept., 1855.

REMARKS.—We would advise a little caution in the use of our correspondent's remedy. The Jamestown or “Jimson” weed (*Datura Stramonium*—“thorn apple”) is a powerful poison, and a quart of the juice seems to us anything but a homœopathic dose. It will, probably “either kill or cure,” and may be tried in extreme cases, commencing with half of the above dose.—EDS.

THE LAMPAS IN HORSES.

A CORRESPONDENT of the New York *Spirit of the Times* inquires as to the burning for the Lampas, and whether that is the only cure for it. With the hope that we may perhaps save one horse from the unnecessary and terrible torture of the burning iron, we undertake to reply:

Burning for the Lampas is as good and humane a remedy as is suffocation between two feather beds for hydrophobia—both have been practiced by the ignorant, and both are effectual. The horse, to be sure, survives the infliction, while the feather-bed patient is bound to die. But both of these barbarous remedies(?) have long been discarded by civilized and intelligent men.

We have occasionally had cases of this complaint in our stable, and have always attributed it to over-feeding. But in no single case, however bad, within our knowledge and experience, has it resisted a course of bran mash, continued for a day or two; with the addition, in one or two instances, of a purgative of salts or aloes. (The first thought of our farm hands always was, to take the animal to the blacksmith's to be burned.)

Youatt says: “The bars occasionally swell and rise to a level with and even beyond the edge of the teeth. They are very sore, and the horse feeds badly on account of the pain he suffers from the pressure of the food on them. This is called the Lampas. It may arise from inflammation of the gums, propagated to the bars, when the horse is shedding his teeth—and young horses are more subject to it than others—or from some slight febrile tendency in

the constitution generally; as when a young horse has lately been taken up from grass, and has been over-fed or not sufficiently exercised. At times, it appears in aged horses; for the progress of growth in the teeth of the horse is continued during the whole life of the animal. In a majority of cases, the swelling will soon subside without medical treatment, or a few mashes and gentle alteratives will relieve the animal. A few slight incisions across the bars with a lancet or a penknife will relieve the inflammation and cause this swelling to subside; indeed this scarification of the bars in Lampas will seldom harm, although it is far from being so necessary as is supposed. The brutal custom of the farrier, who scars and burns down the bar with red hot iron, is most objectionable. It is torturing the horse to no purpose, and rendering that part callous, on the delicate sensibility of which all the safety and pleasure of riding and driving depend. It may be prudent, in case of Lampas, to examine the grinders, and more particularly the tushes, in order to ascertain whether either of them is mashing its way through the gum. If it is so, two incisions across each other should be made on the tooth, and the horse will experience immediate relief."

In lancing the gum for a coming tooth it is much better to nick the gum at the side rather than upon the edge above the advancing tooth. This is practised with young children by most physicians. Any one troubled with a tender and swollen instep can comprehend the rationale of this. If he cuts his boot upon the point of pressure, he finds the foot puffing up more and more, but when he makes a few incisions on either side of the boot, near the sole, the pressure ceases and his instep is at once relieved.

PRACTICAL FARMER.

We wish every farrier and blacksmith in the land who has been guilty of the barbarous practice of mutilating the mouths of horses with a hot iron for the cure of Lampas, would read the foregoing and be convinced of the ignorance under which he has labored.

MANUAL LABOR SCHOOLS.

[Continued from August number, page 243.]

EDITORS SOUTHERN CULTIVATOR—Having briefly mentioned the causes of failure in these institutions, and described the teacher necessary to insure success, it remains to say something of the plan of operation—not the details, but only the general principles on which they should be conducted.

In the first place, the price of board and tuition should not be put down to a teacher-starving point—on the contrary, it should be liberal. There should be no distinction between the pupils. No one's money should purchase the least exemption from the regular duties, nor should any extra duties be allowed to procure exemption from the money payment. It may be expedient to have different classes of students in some countries, but not in this. The number of students should not be large, especially at the beginning; nor should any of doubtful moral character be admitted. After a few sessions, when a sufficient nucleus (so to speak) has been formed and properly drilled, a large number might be admitted and less rigidity might be used in the selection.

Each student should be required to labor a certain number of hours, according to the precept and *example*, of the principal. Precept, in this case, will be useless without example. Whatever is made should belong to the students, the teacher taking an equal share with them. Whether the share of any should be applied to paying for his board or not, would be settled between the student and his parent or guardian. It is absolutely necessary

that the pupil see that the teacher neither gets, nor shows a disposition to get, the proceeds of his labor.

A certain proportion of the proceeds of the labor could be set apart to be given as prizes to the most deserving, and a failure in punctuality or in diligence could be punished by a diminution of the distributive share of the culprit. Any unruliness should be visited with immediate expulsion, and the share of any one expelled at any time should be forfeited and divided among the others or added to the prizes.

At the examinations either monthly, quarterly or semi-annually, all the operations of the Labor department should be inspected and criticised by competent judges.

These are the principles on which an Agricultural School might be conducted with an assurance of success. The details could be easily adjusted, and possibly, I may, at more leisure, or when more violently attacked with an "itch of writing," give those that have suggested themselves to me.

L.

Sumterville, Ala., August, 1855.

N.B.—Can some of your subscribers give a good and cheap plan for a kiln for drying fruit? It is rather late for this season, but I, for one, would be glad to have a plan to study over, and get ready for the next.

L.

DON'T BELIEVE IN BOTS KILLING HORSES.

EDITORS SOUTHERN CULTIVATOR—I see in your last number the question introduced, "Bots or no Bots." I presume nearly all men believe bots do frequently kill horses and mules. My experience is, they do not. I have owned, on an average, over 50 head of horses and mules for the last 20 odd years, and have never lost one of either by bots. Mine have as many complaints, I presume, as common, with such symptoms as most people would call Bots, which I always treat as colic, and with success.

Yours respectfully,

SAMUEL GRISWOLD.

Griswoldville, Ga., August, 1855.

A NEW IMPLEMENT.

DR. CLOUD—Dear Sir:—I do not remember to have called the attention of your readers to Yost's Patent Turn Plow and Scraper. It is now on trial in Hinds, Mississippi, and has given such satisfaction, that two planters, John F. Watson and McKinney L. Cook, have bought the right. They are planters, and show a commendable spirit in bringing out an implement which, with a hand and horse, can do the same work of two. A Mississippi Patent, and owned by Mississippians. Only 70 plows have been made and distributed for experiment. N. B. Ward, a citizen of this county, purchased of Mr. Yost, before he sold to W. and C., the right to four counties, for 15 months, \$500. Mr. W. sold 100 plows—engaged them in one day. This is stated only to show how planters esteemed the implement upon trial.

I learn that the owners charge \$10 at this time. Any planter near Montgomery can procure one from me, on condition he tries it, reports through the press, and deposits it in Montgomery for examination. I am actuated alone by the spirit of doing good to planters. All the owners are my personal friends, it is true, but such interest, it is hoped, no one would suppose would actuate any one to do a wrong. At all events, I only offer for trial—I will have to pay \$10 for another.

M. W. PHILLIPS,
[in American Cotton Planter.

Edwards, Miss., 1855.

Put a spoonful of horse raddish into a pan of milk, and it will remain sweet for several days.

Advertisements.

FRUITLAND NURSERY.

TEN THOUSAND CHOICE TREES!

THE Subscriber offers for fall and Winter Planting (1855-6) the following desirable trees, shrubs, vines, &c.:

APPLES.—A select list of early, medium and late varieties, including many of the new and superior Southern seedlings, heretofore described in *Southern Cultivator*. 25 cents each; \$20 per hundred.

PEARS.—Dwarfs and Standards, many choice varieties. 5 cents each; \$40 per hundred. Extra large trees, \$1.

PEACHES.—A succession from June till October, including many native seedlings. 25 cents each; \$20 per hundred.

APRICOTS, NECTARINES, PLUMS AND CHERRIES, of the best varieties. 50 cents each; \$40 per hundred.

FIGS.—Several choice varieties, including the *Celestial Ataulf*, *Black*, *Green*, &c., &c., 5 cents each.

GRAPES.—The genuine *Ataulf*, from Axt's vineyards; also *Webb's* *Wine* *and* *Black* 5 cents each; \$30 per hundred.

QUINCES.—The Orange variety, wellrooted and strong plants, at 25 cents.

STRAWBERRIES.—More than thirty Premium varieties, including all the most desirable (See separate advertisement of select sorts, in present number.) Prices, 0 cents per dozen, or from \$1 to \$3 per hundred.

BLACKBERRIES.—The genuine New Rochelle or "Seacor's Mammoth." Berries of extra size and flavor. Wellrooted plants at 50 cents each.

POM-GRANATES.—The sub-acid, or sweet variety, at 25 and 50 cents each, according to size.

OSAGE ORANGE PLANTS FOR HEDGING.—A large quantity of vigorous plants, of 1 and 2 years growth, at \$5 to \$8 per thousand.

OSIER OR BASKET WILLOW.—Cuttings of the famous *Pennsylvanian* at \$10 per thousand, or \$2 per single hundred. Also, the *Vio* *and* *the* *per* *thousand*, or \$1 per hundred.

Orders will also be received for choice ROSES, ORNAMENTAL SHRUBS and TREES, EVERGREENS, VINES, GREENHOUSE PLANTS, &c., &c. Address D REDMOND, Augusta, Ga. Oct 5—17

TO FARMERS AND ALL OTHERS INTERESTED IN Agriculture, Horticulture, &c.

WILL be published in October, 1855, the **YEAR BOOK OF AGRICULTURE**; or, The Annual of Agricultural Progress and Discoveries, for 1855. Exhibiting the most important discoveries and improvements in Agricultural Mechanics, Agriculture and Horticulture, Botany, Agricultural and Economic Geology, Agricultural Zoology, Meteorology, &c., together with Statistics of American Growth and Production; a List of Recent Agricultural Publications; Agricultural Patents; and Notes by the Editor on the Progress of American and Foreign Agriculture, for the year 1855, by DAVID A. WELLS, A.M., member of the Boston Society of Natural History, formerly Chemist to the Ohio State Board of Agriculture; Editor of the Annual of Scientific Discovery, Familiar Science, &c., &c.

It is evident at a publication of this character, giving a complete and condensed view of the progress of every department of Agricultural Science, free from technical and unnecessary scientific descriptions, and systematically arranged so as to present at one view all recent Agricultural Facts, Discoveries, Theories and Applications, must be a most acceptable volume to every one interested in the Cultivation of the Soil, or the diffusion of our agricultural knowledge.

The "Year Book of Agriculture" will be published in a handsome octavo volume, comprising upwards of 300 pages, and will contain an elegant Steel Portrait of a distinguished agricultural artist, together with fine illustrations of new Agricultural Machines, Stock, Fruit, &c., together with a series of beautifully colored Engravings.

Although the publication of this work will be attended with very heavy expenses, it will be issued at the low price of \$5, thereby enabling every Farmer and Planter to possess a copy.

On receipt of the published price it will be sent free per mail, to any part of the United States. As the sale will be very large, all orders should be sent in immediately. A liberal deduction to clubs. Address

CHILDS & PETREON,

124 Arch st., Philadelphia.

AGENTS wanted to sell the above valuable work.

Oct 5—17

GREENE'S PURE WHITE WHEAT.

I HAVE a very superior kind of **WHITE WHEAT** that I will engage to those who may want to purchase for seed wheat of the next year, to be delivered at the La Grange depot in good, strong sacks, containing not more than one bushel unsorted, nor less than a half; marked with the name of the purchaser and place of delivery. This Wheat is of the very best and best kind. Sown any time in November, and cut by the 20th of May. It has been exhibited at four different Fairs, and have obtained a premium in every instance. I have a ready made many engagements for the next sowing at five dollars per bushel. No Delivery no pay.

P. H. GREENE

April 2—17

SEE PHERO'S DOGS, SHEP, PIGS, &c.

FOR sale, a very superior and well trained English SHEPHERD'S DOG, imported by the subscriber last season. Also, a fine lot of COTSWOLD SHEEP, Buck Lambs, and UFFOLK PIGS. Address JOHN GILES, South Woodstock, Conn.

Sept 5—17

VEREETAS.

THE Subscriber would respectfully invite the attention of Florists and all lovers of this beautiful bedding plant to his extensive collection, now in full bloom of 300 varieties, and comprising every variety worthy of cultivation that has been sent out, up to the present time. Price from \$1 to 3 per dozen.

Descriptive Catalogues sent to all applicants, enclosing a penny stamp. As I devote this time exclusively to the raising of this particular flower, he is confident that he can give entire satisfaction. Fine strong and well wood plants ready to send out by the middle or last of October. Address DEXTER NOW, Oct 5—17 Clispeo, Hampden Co., Massachusetts.

C. M. SAXTON, 112 Fulton street New York, published the following

BOOKS FOR THE COUNTRY.

Sent free of postage to any part of the United States.

- 1 Brown's American Poultry Book, 200 pages, 125.
- 2 Brown's American Poultry Yard, twenty sixth thousand, \$1.
- 3 Brown's American Bird-Painter, cloth, 70c.
- 4 Dadd's American Cattle Doctor, cloth, \$1.
- 5 Dana's Duck Manual, cloth, \$1.
- 6 Dana's Pigeon Manual, 75c.
- 7 Stockhard's Chemical Field Lectures, \$1.
- 8 Blake's Farm at Home, \$1 25.
- 9 Buist's American Flower Garden Directory, \$1 25.
- 10 Buist's Family Kitchen Gardener, 75c.
- 11 Norton's Elements of Scientific and Practical Agriculture, 60c.
- 12 Johnston's Elements of Agricultural Chemistry, for schools, 75c.
- 13 Johnston's Elements of Agricultural Chemistry and Geology, \$1.
- 14 Johnston's Lectures on Agricultural Chemistry and Geology, \$1 25.
- 15 Downing's Landscape Gardening, \$3 50.
- 16 Fessenden's Complete Farmer and Gardener, \$1 25.
- 17 Fessenden's American Kitchen Gardener, 20c, cloth 50c.
- 18 Nash's Progressive Farmer, 60 cents.
- 19 Richardson's Domestic Poultry, 25c.
- 20 Richardson on the Horse; Varieties, Breeding, &c., 25c.
- 21 Richardson on the Diseases and Management of the Hog, 25c.
- 22 Richardson on the Destruction of the Pests of the Farm, 25c.
- 23 Richardson on the Hive and Honey Bee, 25c.
- 24 Milburn and Stevens on the Cow and Dairy Husbandry, 25c.
- 25 Skinner's Elements of Agriculture, 25c.
- 26 Topley's Chemistry made easy for the Use of Farmers, 25c.
- 27 Allen's Treatise on the Culture of the Grape, \$1.
- 28 Allen on the Diseases of Domestic Animals, 75c.
- 29 Allen's American Farm Book, \$1.
- 30 Allen's Rural Architecture, \$1 25.
- 31 Pardee on the Cultivation of the Strawberry, &c., 50c.
- 32 Prodder's Farmer's Land Measurer, 50c.
- 33 Phelps' Bee-Keeper's Chart, 25c.
- 34 Gunon's Treatise on Milk Cows, illustrated, 38c.
- 35 Gunn's Domestic Medicine, a book for every married person, \$3.
- 36 Randall's Sheep Husbandry, \$1 25.
- 37 Youatt, Randall and Skinner's Shepherd's own Book, \$2.
- 38 Youatt on the Breeds and Management of Sheep, 75c.
- 39 Youatt on the Horse, \$1 25.
- 40 Youatt, Martin, and Stevens on Cattle, \$1 25.
- 41 Youatt and Martin on the Breeds and Management of the Hog, 75c.
- 42 Munn's Practical Land Drainer, 50c.
- 43 Stephens' Book of the Farm, complete, 450 illustrations, \$4.
- 44 The Architect; or, Plans for Country Dwellings, \$6.
- 45 Thier, Shaw, and Johnson's Principles of Agriculture, \$2.
- 46 Smith's Landscape Gardening, Parks and Pleasure Grounds, \$1 25.
- 47 Weeks on the Honey Bee, 50c.
- 48 Will on the Cultivation of Flax, 25c.
- 49 Miner's American Bee Keeper's Manual, \$1.
- 50 Quinby's Mysteries of Bee Keeping, \$1.
- 51 Cottage and Farm Bee Keeper, 50c.
- 52 Eliot's American Fruit-Grower's Guide, \$1 25.
- 53 The American Florist's Guide, 75c.
- 54 Every Lady her own Flower Garden, 25c, cloth, 50c.
- 55 The American Rose Cultivator, paper, 25c, cloth, 50c.
- 56 Hoare on the Cultivation of the Vine, 70c.
- 57 Charlton's Cold Grapes, from direct American Practice, 50c.
- 58 Saxton's Rural Hand Books, 2 vols., \$2 00.
- 59 Bennett's Rabbit Rancier, 75c.
- 60 Remelin's Vine-Dresser's Manual, 60c.
- 61 Neill's Fruit, Flower and Vegetable Gardener's Companion, \$1.

Oct 5—17

1855!

GLOATING NURSERY.

1855!

THE Subscriber having added many additional varieties of Southern Seedling FRUIT TREES to his former stock, comprising some fifty varieties of Apples, one hundred of Pears, twenty of Cherries, twenty of Peaches, Nectarines, &c., and being reassured of their superiority over those raised in Northern Nurseries with confidence, founded on experience, again offers them to the attention of Southern Farmers, Planters and Pomologists at such prices as, he hopes, will have no excuse for continuing to import them. Our trees are all grafted on seedling stocks two years old before grafting, consequently have good roots.

R. K. LAUGHLIN, Esq., 148 Carondelet street, New Orleans, is our Agent for Mississippi, Louisiana, and South Alabama.

* Catalogues for 1855 sent (gratis) to all applicants.

J. VAN BUREN, Clarksville,

Hickman Co., Ga.

Aug 5—17

THE SCIENTIFIC AMERICAN--SEVENTH YEAR.

Splendid Engravings and Prizes.

THE Eleventh Annual volume of this useful publication commences on the 1st day of September next.

The *Scientific American* is an illustrated Periodical, devoted chiefly to the promulgation of information relating to the various Mechanical and Chemical Arts, Industrial Manufactures, Agriculture, Patents, Inventions, Engineering, Millwork, and all interests which the light of Practical Science is cultivated to advance. Reports of U. S. Patents granted are also published every week, including Official Copies of all the Patent Claims, together with news and information upon thousands of other subjects.

The contributors to the *Scientific American* are among the most eminent, scientific and practical men of the times. The editorial department is universally acknowledged to be conducted with great ability, and to be distinguished not only for the excellence and truthfulness of its discussions, but for the fearlessness with which error is combated and false theories are exposed.

Mechanics, Inventors, Engineers, Chemists, Manufacturers, Agriculturists, and people of every profession in life, will find the *Scientific American* to be of great value in their respective callings. Its counsel and suggestion will save them hundreds of dollars annually, besides affording them a continual source of knowledge, the experience of which is beyond pecuniary estimate.

The *Scientific American* is published once a week; every number contains eight large quarto pages, forming annually a complete and splendid volume, illustrated with several hundred original engravings. Seven copies sent gratis.

TERMS—Single Subscriptions, \$2 a year or \$1 for six months. Five copies for six months, \$1; for a year, \$2.

For further Club rates and for statement of the four large cash prizes, offered by the publishers, see *Scientific American* Southern, Western and Canada money or U. S. Office Stamps taken at par for subscriptions. Letters should be directed (post paid) to

MUNN & CO., 2 Fulton-st., New York.

Messrs Munn & Co., have been, for many years, extensively engaged in procuring patents on new inventions, and will advise inventors, without charge, in regard to the novelty of their inventions.

Oct 5—11

75,000 FRUIT TREES

OF Southern growth and perfectly adapted to this climate, are now offered for sale at the Mississippi Nurseries. Persons in want of superior FRUIT TREES at moderate prices would do well to send in their orders early. We can supply the apple in 250 varieties from 1 to 4 years old; the Pear in 4 varieties, both Standard and Dwarf from 1 to 3 years old; the Peach in 10 varieties from 1 to 3 years old, and other fruits in all the best varieties. The celebrated Southern Seedling Apples and new European PEARS can be supplied in limited quantities.

Priced Catalogues sent to all applicants, and all orders promptly attended to. Address C. M. SWASEY & CO., City—6t

AGRICULTURAL MACHINES AND IMPLEMENTS.

SHUT MACHINES—Luck's or Pilkington's—the best and cheapest made. Price \$45. HORSE POWERS and THRESHERS; Allen's and Emery's superior Fanless Corn and Grain Powers; Trubie's, Bone dust and other CIRCULAR HORSE POWERS, THRESHERS, with or without Separators; GRAIN MILLS, CORN SHRELLERS, PLOWS of all kinds, STRAW CUTTERS, &c. Also, a general assortment of the best made and most approved Agricultural and Horticultural IMPLEMENTS Field and Garden SEEDS, GUANO, BONE DUST, &c. For sale by

Oct 5—8t 179 and 91 Water street, New York.

OF THE PLANTERS OF THE SOUTH.

THE Belleville Manufacturing Company would call your attention to the different styles of GEORGE PLAINS, which they are now manufacturing for the coming season, believing they are better adapted to the wants of the South than any negro cloth manufactured at any point north of the Potomac. They have been successfully supplying the orders of Planters in the interior and on the seaboard for a number of years, and have given satisfaction in every respect, so much so that none who have used them one season have failed to order them afterwards; and the name has been considered so fair a guaranty of their quality that in many cases the Northern Manufacturers have endeavored to imitate and pass off their fabrics as the genuine *George Plains*. Having increased the capacity to produce these goods, we, therefore, desire to deal directly with the Planters, so they may get the genuine article for their negroes, which, for warmth and wear, will save them more than its cost in Doctor's Balm.

We are now making three styles, to wit:—The Heavy White Twills at 4 cents per yard; the Heavy White Plains, 32 cents per yard; the Brown A Plains, 21 cents per yard.

The goods delivered at the Agency in Augusta, Ga., and forwarded free of charge for forwarding and to be sent for on receipt of the goods, by orders on any responsible Factor or Commission Merchant, payable on the 1st February next. All orders will be put up in quantities as directed, in a bale or bales, and can be shipped from Augusta to any point South or West at as low a rate of freight as from any point. Planters who have no regular Factor, can give a reference either here in Augusta, Charleston, Savannah, Mobile, Montgomery or New Orleans or in such place as they are known, and if satisfactory, the order will be entered at once and the goods put up and forwarded at an early date thereafter as possible.

The highest market price will be given for WOOL, delivered in Augusta, in exchange for cloth. Address

GEORGE SCHLEY, President,
or, S. H. OLIVER, Agent Belleville Factory,
Augusta, Ga.

Jul 25—4t

FRUIT AND ORNAMENTAL TREES.

(AUTUMN OF 1855)

OUR new wholesale Catalogue or Trade List for the Autumn of 1855 is ready and will be sent gratis to all who enclose a stamp. The stock now on the ground is of the finest description, and by far the largest that has ever been offered in this country.

Nurserymen, Dealers and Planters can be supplied on very advantageous terms, and they will find it to their interest to consult our list and examine stock before purchasing. Our arrangements for packing and shipping are so complete that we can forward packages to the most remote parts of the United States with safety.

Any of the following Catalogues will be sent to all who apply and enclose a stamp for each:

No. 1 A Descriptive Catalogue of Fruits. No. 2 A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c. No. 3 A Catalogue of Dahlias, Verbenas, Petunias, and select new Greenhouse and Potted Plants, published every spring. No. 4 A Wholesale Priced Catalogue for Nurserymen and Dealers. No. 5—A Supplemental Catalogue of Fruits—containing prices of Fruit Trees for 1854 and 1855, and List of new varieties.

WM. VANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.

Sep 25—2t

FRESH IMPORTED TURMIP SEED.

I HAVE just received a large lot of fresh imported English TURMIP SEED, to which I call the attention of all Planters and Gardeners South. Among the assortment are Large Flat Dutch, Large Globe, Large Norfolk, Red Top and Ranover. For sale, in quantities to suit purchasers, at only \$1 per pound. Orders from the country solicited.

Sep 25—2t

WM. HAINES, Broad-st., Augusta, Ga.

CARMICHAEL & BEAN,

DEALERS in HARDWARE, CUTLERY and AGRICULTURAL IMPLEMENTS, Augusta, Ga.

We are, also, Agents for the following articles:—SALAMANDER SAFES, made by Stearns & Marvin, New York; LITTLE GIANT CORN AND COB MILLS; Indian Rubber BELTING, PACKING and HOSE, made by Boston Belting Company; ATKINS' SELF RAKING REAPER; CIRCULAR SAWS, made by Hoar & Co., and Welch & Griffith's HORSE POWERS; FAN MILLS, THRESHERS and SMUT MACHINES.

April 25—1t

CARMICHAEL & BEAN,
Augusta, Ga.

PURE DEVON AND GRADE CALVES FOR SALE!

ONE very beautiful thorough-bred NORTH DEVON HEIFER CALF, 6 months old—sire, "Keokuk," dam, "Lively Dame"—for pedigree of which see September number (1855) *Southern Cultivator*.

Also, a number of grade or half blood heifer and bull CALVES, of 1854, various ages—all from good native cows, and sired by premium bull "Keokuk," purchased from the Messrs. WALKER by Judge WARREN. For particulars, &c., Address D. REDMOND, May 25—1t

Augusta, Ga.

PERFUM STRAWBERRY PLANTS!

THE Subscriber will furnish, at any time after the first of October, a limited number of the following desirable varieties of STRAWBERRY PLANTS, at the prices annexed:

Pistillates.	Per Hundred	Staminates and Hermaprodites.	Per Hundred.
Hovey's Seedling.....	\$2	Early Scarlet.....	\$4
McAvoy's Superior.....	3	Longworth's Prolific.....	3
McAvoy's Extra Red.....	3	Walker's Seedling.....	3
Crimson Cone.....	3	Boston Pine.....	3
Black Prince.....	3	Genesee Seedling.....	2
Crescent Seedling.....	3	Iowa.....	1
		Orange Prolific.....	1

A deduction of 25 per cent. when 50 or more plants are ordered at one time. All plants carefully packed, and sent in good order to any part of the South. Orders, accompanied with the money, promptly attended to. Address

Aug 25—1t

D. REDMOND, Augusta, Ga.

THE FARMERS AND PLANTERS OF THE SOUTH.

THE undersigned have received the exclusive Agency for the entire South and Southwest for the very best CORN and COB CRUSHERS now in use, and the only article of the kind that will make fine meal, suitable for the table—this they are guaranteed to do. These will effect a saving of 25 per cent., or fully one-third, in crushing the food prepared for stock, as has been satisfactorily tested. Price from \$50 to \$75. Every Farmer and Planter in the land should have them.

Manufactured and for sale by W. F. HENRY & Co., Meeting street, near Line street, Charleston, S. C.; McCREERY & HOOKE, Brown's Wharf, Charleston, S. C. and J. A. ANSELY, Commission Merchant, Broad street, Augusta, Ga.

Aug 25—5t

LANGLEY & CO., General Agents,
Charleston, S. C., and Nashville, Tenn.

F. McCREERY,

Charleston,

R. M. HOOKE,

Chattanooga.

McCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market.

Feb 25—1t

FERTILIZERS.

HITHERTO the Planters of the South have been dependent on the North for all the artificial fertilizers they have used. The New Orleans Bone Black Company recently established in this city, with facilities for the manufacture of manures second to none in the United States, are prepared to fill orders for the following FERTILIZERS at the same prices charged in Baltimore and New York.

GROUND BONES.—For fruit trees and grape vines these are particularly beneficial. Five hundred pounds applied to an acre of ordinary pine wood land, aided by good, deep plowing, will produce a crop of Cotton as large as any of the best bottom lands. It is ground both fine and coarse, and is put up in barrels. The coarse is $1\frac{1}{2}$ ¢ per pound—the fine and sifted, $1\frac{3}{4}$ ¢ per pound. Its great durability in the soil renders it the cheapest manure in use.

PHOSPHATED GUANO.—This valuable fertilizer, composed of equal parts of Peruvian Guano and fine Bone Dust, is, in every respect, superior and far more lasting than Guano used by itself. It is an established fact that Guano lacks Phosphate of Lime, and, also, that one half of its fertilizing qualities are dissipated in the air, which is plainly to be perceived by the strong ammoniacal smell constantly emitted by it until its strength is gone.

Bone Dust is nothing more than Phosphate of Lime, and this, besides being a strong and valuable manure, fixes the Ammonia in the Guano and retains it until it is absorbed by the plants. A trial of this fertilizer will satisfy any one of its durability and superior efficacy to simple Guano. Three hundred pounds applied to the acre will show its effects for five years or more, by an annual increase of at least 10 percent. In the crops. Put up in barrels of about 200 pounds each, at 2 cents per pound.

SUPER-PHOSPHATE OF LIME.—This highly concentrated manure is composed of Animal Matter, Sulphuric Acid, Bone Dust, Gypsum and Sulphate of Iron, each of which, by itself, is a powerful fertilizer.

Five hundred pounds, or about two barrels of this Super-Phosphate of Lime have been found to be fully equal, in beneficial effects, to thirty wagon loads of ordinary Stable Manure.

The convenience of this article consists in its small bulk and consequent ease of handling. It may be used before or after planting of the crop. A tablespoonful put in each hill of Corn or Cotton, has been known to increase the yield twenty per cent. Five hundred lbs. to an acre of common piney woods land having a clay subsoil, will enable it to yield as good a crop as any ordinary bottom land. A single hundred pound applied as a top-dressing to an acre of meadow land, will increase its products at least a ton of hay. To Horticulturists, it is invaluable, as it may be applied to Fruit Trees at any season of the year. More than two thousand bushels of Ruta Baga Turnips have been raised to the acre, by the application of 200 lbs. of this fertilizer. For Garden crops, it is all that is necessary for success.

The Super-Phosphate of Lime is put up in barrels containing about 200 pounds, and is sold at 2 cents per pound.

POUDRETTE.—Two large establishments in New York, turning out over fifty thousand barrels annually, are not able to supply the demand of the market gardeners in the vicinity of that city for this justly popular manure. It is composed of night soil, deodorized and made into a powder similar to Guano, and is put up in barrels at \$2.50 per barrel.

Orders by mail or otherwise, addressed to the subscriber, will receive prompt attention.

D. C. LOWBER,

37 Poydrass street.

Land Plaster, Peruvian Guano and Land Lime may also be ordered at the above address. July—tf

FOR SALE!

A SEA Island Cotton Plantation, containing 900 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skidaway Island, in Chatham county, on a bold salt water river, the health of which is unquestionable, and the facility for manuring with marsh and mud is unsurpassable, the land lying three sides on the river. The place is situated 11 miles from Savannah. The lands of Skidaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters and for stock raising. Price \$3,500. Terms accommodating. Apply to S. F. DUPON, Savannah.

Isle of Hope, March 9, 1855.

April—tf

DOMESTIC ANIMALS AT PRIVATE SALE.

L. G. MORRIS' Illustrated Catalogue, with prices attached, of a few short Horned and Devon BULLS, and Bull CALVES; a few HORSES; South Down RAMS; Berkshire, Suffolk and Essex SWINE, will be forwarded (if desired) by addressing L. G. MORRIS, Fordham, Westchester county, N. Y., or A. J. BECAR, 157 Broadway, N. Y. It also contains portrait, pedigree and performance on the Turf of the celebrated horse, "*Monarch*," standing this season at the Hertsdale Farm. June55—tf

AYRESHIRE HEIFERS FOR SALE
AT \$100 EACH.

HEIFER, "*PARAGON*," one and a half years old, calved March, 1853; Dam "*Princess Mary*," grand dam imported "*Mary Queen of Scots*," sire, imported bull "*Robert Burns*," "*Princess Mary*" gave 15 quarts per day, "*Mary Queen of Scots*" upwards of 30 quarts.

Heifer, "*MARIE LOUISE*," one and a half years old, calved March, 1858; dam "*Maria Teresa*," by imported "*Germantown*," grand dam "*Mary Queen of Scots*," imported from Scotland; sire, imported bull "*Robert Burns*," "*Maria Teresa*" gave 20 quarts per day, "*Mary Queen of Scots*" gave 30 quarts.

Jan55—tf

RICHARD PETERS, Atlanta, Ga.

PLANTATION FOR SALE.

I OFFER for sale, my PLANTATION, situated in Marengo county, Ala., nine miles south of Demopolis. The place is very productive in corn, cotton and small grain, and the soil being very rich in lime, I think it would produce clover admirably. I have just seeded 80 acres, on which there is a beautiful stand of young clover. The plantation is healthy, has an abundance of stock water in every field, and offers great advantages to any one wishing to raise stock of every kind. Belonging to and adjoining the plantation, is a large tract of heavily timbered pine land. There is, on the place, a horse-power Saw Mill, which will cut from 1200 to 1500 feet of lumber per day, which can be made to pay handsomely, as the demand for lumber greatly exceeds the supply.

My residence is $2\frac{1}{2}$ miles from the plantation, healthy, convenient to churches and schools and in a thickly populated neighborhood. The dwelling contains 8 rooms; all necessary outbuildings; a very large and rich garden; plenty of good water; pasturage and fire wood convenient. The whole contains 1650 acres—900 or 1,000 cleared, and under fence. As I am determined to move from this section, I will sell a great bargain to any one for cash, or negotiable paper, bearing 8 per cent. interest. I would like to sell stock of all kinds, corn, fodder, oats, &c., at the same time.

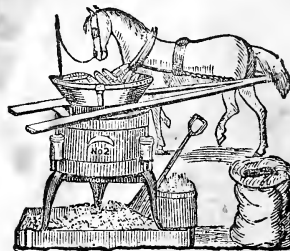
I made on the plantation, last year, seven bales of cotton to the hand, and corn to do the plantation, and the seasons were anything but propitious. The titles are clear and indisputable, and the whole may be bought at the extremely low price of Twelve Thousand Dollars.

My post office is Spring Hill, Marengo county, Ala., where letters, post-paid, will receive prompt attention. I will take great pleasure in showing the place to those wishing to purchase.

July 4t

JAMES R. JONES.

SCOTT'S LITTLE GIANT CORN AND COB CRUSHER.



THE attention of Planters and Stock-Feeders is respectfully called to this Mill, as the best and most profitable article now in use. In setting up, no mechanical work is required, it being only necessary to fasten it down to a floor or platform.

No 2 will crush 10 bushels per hour with one horse, and it is sold for \$55, all complete, ready for attaching the horse.

No. 3, at \$65, grinds 15 bushels per hour; and No. 4, at \$75, grinds 20 bushels per hour with two horses.

CARMICHAEL & BEAN, Agents,
Augusta, Ga.

AUGUSTA, GA., April 8, 1855.

I have been running one of *Scott's Little Giant Corn and Cob Mills*, No. 4, for the last five weeks, and it performs to my entire satisfaction. It was warranted to grind 20 bushels per hour, but I have ground over 35 bushels in an hour and a half, or equal to 23½ bushels per hour. In feeding 30 horses, I save at least 100 bushels of Corn per month, it now requiring only 200 bushels of Corn with the cob, where I formerly fed 300. I consider it decidedly the best kind of Crusher ever got up, and if I could not replace mine I would not sell it for \$500.

June55—tf

I. D. MATHEWS,
Proprietor of the Augusta Omnibuses.

GEORGIA RAILROAD.



CHANGE OF SCHEDULE.

PASSENGER TRAINS.

LEAVE Augusta, daily at 6 A. M. and at 5 15 P. M.
Arrive at Augusta daily at 3 25 A. M. and at 6 59 P. M.
Leave Atlanta daily at 8 50 A. M. and at 6 15 P. M.
Arrive at Atlanta daily at 2 50 A. M. and at 3 36 P. M.

CONNECTING WITH ATHENS BRANCH.

Arriving and leaving Union Point daily (Sundays excepted) at 10 A. M. and leaving at 2 30 P. M.

WITH WASHINGTON BRANCH.

Arriving at Cumming daily (Sundays excepted) at 9 A. M.
Leaving " " " 3 30 P. M.

WITH SOUTH CAROLINA TRAINS.

Leaving Augusta daily at 9 20 A. M. and 9 50 P. M.

Arriving at Augusta daily at 8 00 P. M. and 4 30 A. M.

WITH ATLANTA AND LA GRANGE RAILROAD.

Leaving Atlanta, daily at 3 30 A. M. and 4 45 P. M.

Arriving at " " 7 55 A. M. and 5 25 P. M.

WITH WESTERN AND ATLANTIC RAILROAD.

Leaving Atlanta daily at 9 A. M. and 6 P. M.

Arriving at " " 3 A. M. and 3 P. M.

GEO. YONGE, General Superintendent.

July 14, 1855.

Aug56—tf

RANDALL'S COTTON PLANTER!

PALMYRA, Lee County, Ga.,
March 12th, 1856. }

To Cotton Planters.

WE DESIRE to call your attention to a Machine which we have invented and patented for the PLANTING OF COTTON. Its superiority over all others used for a similar purpose, consists in its great simplicity, requiring no more experience for its use than for an ordinary plow; the cheapness of construction, the great saving of time and labor in the planting of the crop, but more especially in the cultivation of it.

The certificates which we herewith present to you are from some of the most respectable and intelligent planters in our country, who have thoroughly tested our Machines, and sustain us in the above statement of the advantages it possesses. We are confident that when presented to the Cotton Planters throughout the Southern States, it will, in a short time, be universally used by them for planting their crops.

In bringing these Machines before the public, we have taken every precaution to free them from the liabilities of being associated with the mass of patented inventions, which do not stand a practical test, and we can assure all who will try them that they will fully equal our representations.

The Machines may be had of the following manufacturers:—
THOMAS J. CHEELY, Augusta, Ga.; BROWN, CLEMENS & Co., Columbus, Ga.; J. H. WATSON, Lee co., Ga.

WM. W. CHEEVER, Esq., Albany, Ga., is our only Agent, who will contract for us with parties wishing to manufacture the Machines in any part of the United States, RANDALL & MERCER.

CHARLES RANDALL,
LEONIDAS B. MERCER. }

Palmyra, Lee co., Ga., Aug. 10, 1854.

GENTS:—Having planted your entire crops with our Cotton Drill, please give us your candid opinion of the Machines, and particulars as to the advantages to be derived from their use, and oblige.

Yours respectfully,
To Messrs. S. D. MCLENDON, WM. H. OWENS, ROBT. LUNDY.

Palmyra, Lee co., Ga., Aug. 12, 1854.

GENTS:—Your favor of August 10th, came duly to hand. In giving you our opinion of your Drills, in the first place we would say, we are pleased in every particular with their operation, and as to the advantages to be derived from their use:—the first is the saving of at least one hundred and fifty bushels of Cotton Seed, in planting each hundred acres; second, a saving of labor in planting, of one horse and hand, planting from eight to nine acres per day, the Machine opening the furrow, dropping the seed and covering as it moves over the ground; third, a more perfect stand may be obtained with your Drill than by planting in the common way; fourth, a saving of at least one-third in the labor of chopping out; fifth, the seed being put in a line not one-half an inch in width, the chopping out can be deferred, until the season for *lice* is passed, without injury to the growth of the Cotton; and being in this narrow line with a sweep or narrow rooter, you can side so close as to cover up the first crop of grass in the Drill without injuring the stand of Cotton in the least. By this close sowing nearly all hoe work may be dispensed with, after chopping out. These we consider the principal advantages to be derived from the use of your Drills. On a retrospect of our last year's experience we have no hesitation in saying that any person with your Drills, can cultivate at least twenty five per cent. more Cotton to each hand, with the same labor, than can be cultivated in the common way of planting. We put that at a low figure so that no one can say they have been deceived by us. In the hope that these Machines may come into general use, we subscribe ourselves,

Yours very truly,
S. D. MCLENDON,
WM. H. OWENS,
ROBT. LUNDY.

Albany, Dougherty co., Geor. Aug. 16th, 1854.

GENTS:—Yours of August 14th, with enclosed is before us. In reply we would state that we believe any person using your Cotton Seed Drill, will realise every advantage Messrs. McLendon, Owens & Lundy speak of; and we fully coincide with them in their high appreciation of your invention.

Yours respectfully,
J. H. WATSON, Lee co.
DAVIS PAGE, Dougherty co.
WM. B. MCLENDON, Randolph co.
B. B. DANIELS, Lee co.
Y. G. RUST, Dougherty co.
JAMES CHEEK, Lee co.
JEREMIAH HILLESMAN, Lee co.
To Messrs. RANDALL & MERCER.

Palmyra, Lee co., Aug. 10, 1854.

MESSRS RANDALL & MERCER:—In reply to yours of the 5th inst. in regard to the operation of your Cotton Seed Drill, I am happy to say that after planting a portion of my crop in the old way, I was enabled to obtain one of your Drills, with which I finished. It is what we have long wanted, and the beautiful work it performs has perhaps been attempted in a thousand different ways by intelligent planters, but with only partial success; yours leaves nothing to be desired; it deposits the seed uniformly, and constantly on a line of one to two seeds in width; saves about one-half of the labor in planting, and one-third of the hoe labor in cultivating. All must use this drill in self defence; I shall, for one.

More cotton may be planted and cultivated, and if not the labor saved, may be turned into other channels. Yours respectfully,
April—11 J. L. MERCER.

**THE SOUTHERN NURSERIES,**

WASHINGTON, ADAMS CO. MISS., are now well stocked with all the varieties best adapted to the South, of FRUIT TREES and SHRUBS, VINES, STRAWBERRY PLANTS, &c.; and of ROSES and other ORNAMENTAL SHRUBS and TREES, EVERGREENS, &c., all of Southern growth, and of good size.

The packing is so carefully attended to, that Trees and Plants, Roses, cuttings for hedging, &c., are sent to all parts of the South, with scarcely a chance of their being injured.

Catalogues will be sent on application.

Nov—11.

THOMAS AFFLECK.

AFFLECK'S**SOUTHERN RURAL ALMANAC.**

A handsome little volume, full of useful and interesting hints on RURAL AFFAIRS IN THE SOUTH.

WILL BE ISSUED AS USUAL ABOUT THE FIRST OF NOVEMBER. Price 10 cents.

AFFLECK'S COTTON PLANTATION RECORD AND ACCOUNT BOOK—New Edition, now ready—No. 1, for forty hands or less, \$2 50. No. 2, for eighty hands or less, \$3 00. No. 3, for one hundred and twenty hands or less, \$3 50.

AFFLECK'S SUGAR PLANTATION RECORD AND ACCOUNT BOOKS—No. 1, for 80 hands or less, \$3 00. No. 2, for 120 hands or less, \$3 50.

These Books are now in general use amongst Planters. They will be sent by mail, prepaid and carefully enveloped at the above prices, and when five copies are ordered by clubs, and remitted for, an additional copy will be sent as commission to the individual making up the Club. Orders solicited from Booksellers and other dealers, to whom a liberal discount will be made.

B. M. NORMAN, Publisher,

14 Camp street, New Orleans.

Nov—11

CHEROKEE!**A VALUABLE LOT OF LAND FOR SALE.**

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small Grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this Lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings—a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

*For terms, &c., apply to the subscriber, or to Col. J. W. M. BERRIEN, of Rome, Ga., who will take pleasure in pointing out the land.

September—11

D. REDMOND,
Augusta, Ga.

EXTENSIVE COLLECTION OF SELECTED ROSES AND**SOUTHERN RAISED FRUIT TREES.****AUGUSTA NURSERY.**

A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply the sort of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camelia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE.

Nov—11

Augusta, Ga.

P. D. GATES,

COMMISSION MERCHANT,

AND Dealer in AGRICULTURAL IMPLEMENTS and MACHINERY, No. 12 Broadway, New York.

Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Powers and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines. June 25—City*

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., NOVEMBER, 1855.

NO. 11.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

[CIRCULAR.]

TO THE PLANTERS, FARMERS, HORTICULTURISTS AND RURAL RESIDENTS OF THE SOUTH!

ANOTHER number of our journal will complete the present volume. The *Southern Cultivator* is now thoroughly and permanently established, having been before the public for thirteen years, though (we regret to say) many of our people who cultivate and gain their living from the soil are still apparently ignorant of its value.

Yet, however, who have perused its pages for any length of time, are now competent to judge of its merits; and we doubt not, will feel willing to point out its peculiar advantages to your friends and neighbors, who have not yet become acquainted with its aims, objects and utility.

These aims and objects are, briefly, to improve the Agriculture and Horticulture of these Southern States, and to contribute, as far as possible, to the enjoyment, elevation and profit of those who are endeavoring to build up our great and important rural interests.

Judging from numerous and constantly-repeated words of approval which we are daily receiving from subscribers in all parts of the South, we believe the *Cultivator* is properly appreciated and doing much good wherever it is known and circulated. There is yet, however, (as before stated) a large class of agriculturists in the South who have scarcely even heard of it; and to reach this class, we request the assistance of all our present readers and subscribers.

To extend its circulation, it has been usual with some of our zealous friends and co-workers to go about among their friends and neighbors and form clubs, which often number from twenty to one hundred, or even more.

We are aware that many otherwise sensible people have imbibed a prejudice against what they style "book farming;" but as well might they decry and condemn "book doctoring," "book lawyering," "book preaching" and all other descriptions of learning gleaned from books. When it is remembered that "book farming" is generally based on recorded experience and practical deduction of our wisest and most successful agriculturists, who greatly enlarge their audience by writing out instead of speak-

ing their views and opinions, and who thus place on permanent and enduring record much that would otherwise die with them and be lost forever; it must be evident that all such prejudice as we have alluded to has no good foundation, and is unworthy of this age of improvement and progress.

With the hope, then, of increasing the circulation and usefulness of the *Cultivator* throughout the South, we confidently rely upon the vigorous aid and co-operation of all our present subscribers; each of whom, we trust, will add many new names to his own, and forward to us before the beginning of our next volume, in January, 1856.

TERMS OF THE CULTIVATOR.

One Copy, 1 year...\$1 | Twenty-five Copies, 1 year...\$20
Six Copies, " " " 5 | One Hundred " " " 75

And, by way of offering further inducements to exertion, and as a slight remuneration to those who may be disposed to exert themselves in our behalf, we cheerfully offer the following

PREMIUMS.

1. For every Fifty Dollars sent us, we will forward Fifty Copies of the *Cultivator* for one year, as we may be directed, and award the person who sends the money Fifteen Dollars worth of choice Fruit Trees or Books of his own selection.

2. For Twenty-Five Dollars, we will send 25 copies of the *Cultivator*, and \$7 in choice Fruit Trees or Books, as before.

3. For Fifteen Dollars, 15 copies of the *Cultivator*, and \$1 in Fruit Trees or Books.

4. For Ten Dollars, 10 copies of the *Cultivator* and \$2 50 in Fruit Trees or Books.

5. For Five Dollars, 6 copies of the *Cultivator*, or 5 copies and \$1 25 in Trees or Books.

☞ In all cases where it is not convenient to send trees or books, or where the parties prefer it, we will send the cash, or they can retain the proper proportion, as above, in remitting.

☞ The postage on the *Cultivator*, when prepaid at the office where it is received, is only about six cents per year! Sample numbers always sent gratuitously, when desired. Large sums of money may be sent in checks or drafts, payable to Wm. S. Jones. The Bills of all specie paying

Banks received at par. All money remitted by mail, postage paid, will be at the risk of the Publisher.

READER! will you not use your influence to form a Club at once, in your vicinity, and forward us the list before the beginning of our new volume, in January?

Address: WM. S. JONES, Augusta, Ga.

SEE TERMS ON LAST PAGE

Plantation Economy and Miscellany.

GRASSES FOR THE SOUTH. GUINEA GRASS—MEANS GRASS.

BY REV. JOHN BACHMAN, D. D., OF CHARLESTON.

EDITORS SOUTHERN CULTIVATOR—In my yesterday's visit to the Agricultural Fair at Atlanta, the pleasure I derived from meeting with many old friends, and others known to me by characters, and whom I was desirous of meeting, was somewhat marred on being reminded of my own negligence, in not having replied to several correspondents, who, for two years past, have written to me for my opinion of the grass recently introduced into the Southern States, under the name of Guinea Grass. I have several excuses which my partial friends, among the rest Col. SUMNER, who had written very pressingly on the subject, would, I am sure, readily accept; but I think it the best and shortest mode to plead guilty to the charge of negligence, to promise amendment and to give an evidence of it in this communication, which I am sure you will publish, if for no other purpose than that of enabling me to make an apology to those who were entitled to better treatment at my hands.

To return to the grass, I will endeavor in somewhat of a professional habit, to show:

1st. What it is not.

2nd. What it is.

3rd. Offer a few reflections on this singular and providential production

1. It is not the Guinea Grass. Of this I can speak very positively. The Guinea Grass (*Holcus Polystachyus*) bears a general outward resemblance to this variety—it is not unlike it in the shape of the leaves and in the rapidity of its growth, but in all other essential particulars it differs very widely. I cultivated a square in my garden in Charleston, of the true Guinea Grass for more than 25 years. I procured the seeds from my neighbor, the late Mr. POINSETT, having, at that time, no other object in view than that of obtaining for my herbarium specimens of a grass that had contributed so largely to the then prosperity of Jamaica and other West India Islands. So luxuriant, however, was its growth, that I was induced to cultivate it as green food for my cows and horses. The great difficulty was in preserving the seeds, which dropped as soon as they ripened, and the roots were invariably killed by the first frost of winter. At length, I adopted the plan of taking up a boxful of roots and removing them to the green house during the winter, to be sub-divided and transplanted in spring. Such, however, was the character of the delicate fibrous roots that, like those of the lemon grass, (*Andropogon schenanthus*) similarly constituted, a great majority of the plants perished by the removal. My next and only successful plan was to suffer a small patch to remain uncultivated, and run to seed, those, being very caducous, fell to the ground

as fast as they ripened. The earth was, in autumn, covered with straw to preserve the seeds from frost. On being removed and the ground raked over in spring the seeds vegetated, and the little plants were set out in rows. When, however, the Egyptian Millet was introduced, the seeds of which were easily preserved, I substituted it for the Guinea Grass. The true Guinea Grass is a tropical plant—has a delicate fibrous root like the wheat and rice, and not tuberous, like the variety which now, very improperly, goes under the same name. The latter has also a light stripe running longitudinally along the midrib of the leaves, by which it may easily be distinguished. There are many other characters which it is scarcely necessary to notice here, that draw a broad line of separation between these two very distinct species. As the grass recently cultivated under the name of Guinea Grass is a different species, it is right and proper that our present cultivated grass should not usurp a name to which it is not legitimately entitled. All honest men prefer to be called by their proper names and an *alias* always awakens suspicion. Our Southern planters would be laughed at were they to send specimens of this variety to Europe as the Guinea Grass. I will, before I close this letter, give further reasons why this erroneous name should no longer be retained.

2. What is it? In an address I delivered to Columbia, S. C., during the meeting of the Legislature in 1853, I added a note on the Grasses, in which incidentally referred to this variety, named Guinea Grass, which I had then not seen, in these words: "I am inclined to think that the productive grass under the above name, spoken of by gentlemen in the interior, as producing no seed and is not injured by frost, is scarcely the Guinea Grass, and must be some other species." The opportunity has now been afforded to me of proving that my conjectures were well founded.

To save our Cotton planters from falling into hysterics, on having the ghost of an old enemy conjured up before their affrighted imaginations, I will premise by saying that it is one of the most productive grasses that has, as yet, been cultivated in our Southern country and that there is no danger of its spreading in the Cotton fields.

The grass is a distinct and, evidently, a permanent variety of the panicled Millet (*Sorghum halapense*) and a native of Nubia, Syria and Greece, and is, in fact, a variety which has sprung out of the old and much hated and mis-named Means Grass.

When this grass was originally introduced, I pursued the plan I usually adopt under similar circumstances. I first endeavored to find out its name, and the country in which it had originated. After much trouble, I found it described in a single line in LINNÆUS' 12th Edition. (*Holcus halapense*, in Tom. 3, page 639). I next submitted it to the test of an experiment. I planted it in a square in my town garden. The soil was rich and the product was immense—equal to that of the best Guinea Grass or Egyptian Millet. It possessed, however, two properties that prevented me from recommending it. The seeds came up wherever they were dropped, and the tubers threw out runners, like the Nut Grass, and extended in one instance, by my own measurement, to the distance of thirty feet. In deference to the very reasonable fears of my neighbors who were threatened, as they erroneously supposed, by an enemy more annoying than the Nut Grass or Canada Thistle, I had the whole bed rooted up, which was no difficult task. My neighbors were as thankful for the riddance, as my pig was for an abundant supply of his choice food. One other slight digging up of stragglers exterminated the last root; so, having only kept it for an experiment, as a man keeps a rattlesnake or a pet bear for his own amusement, I could look

the terror-stricken gardeners and planters in the face, and say with MACBETH to the ghost of BANQUO:

"Thou canst not say I did it;
"Never shake thy gory locks at me."

The notes of execration that were re-echoed from the seaboard to the mountains, against this pest, had scarcely subsided when a new discovery was announced. It was a grass possessing all the abundant growth of the Means Grass, having neither seed or runners, which was restricted to the bed where it was planted. This was a desideratum. Now for the name. As it bore some resemblance to the Guinea Grass, that name was improperly applied to it. It was stated that the true Guinea Grass had been planted by the side of it, and that, in time, all were alike. The same results were produced in my own garden with the Means Grass by the side of the Guinea Grass. The secret was that the latter was killed in winter and the former lived. There was no blending, but a supplanting of species.

When the specimens of this peculiar grass were sent to me by my friend, Col. SUMMER, I was absent from home; the labels had been misplaced and I had no opportunity of examining it until yesterday, when I saw it in a lot at Atlanta, cultivated by Mr. PETERS, from which I was supplied with specimens of the roots, stalks, and the infertile florets.

My first examinations were directed to the inquiry whether it might not prove to be a hybrid between the Means Grass and the Guinea Grass, or some other species. Hybrids, it is known, are infertile; but they possess characteristics which assimilate them to both species, and plainly show their double origin. This, therefore, could be no hybrid, since it resembled the Means Grass and no other.* The character of the roots is very peculiar, and belongs to few other species of grass, and to none with whom this could have hybridized.

It was not difficult to ascertain that this was a variety of the Means Grass, possessing such peculiarities as to call forth questions very interesting to the physiologist. Varieties are known to spring up in all animals and plants subjected of domestication or culture. All our improved breeds in domesticated animals and poultry are varieties, produced not by the slow process of gradual change, but by the sudden and inexplicable appearance of varieties that, by being kept separate, will continue to perpetuate the same varieties to the end of time. The same may be said of all our vegetables, grains, cottons, &c. Some of these varieties are peculiarly striking, as is the case with corn where each grain is covered by a separate husk—the pomegranate cotton, and the remarkable varieties in many kinds of fruits. Occasionally a variety springs up which bears fruit, with infertile seeds. I have frequently seen this in the Apple, Pear and Plum, and once in a Persimmon tree. Such a variety could only be propagated by any of the modes of grafting, which is simply an extension and perpetuation of that particular plant, and could be effected in no other way since it bears no seed. The little fruit called the currant, bearing no seed, was produced in Zante, or the Mediterranean, from the common grape (*Vitis vinifera*) of that country. It has been perpetuated for many ages and is an essential ingredient in puddings and cakes in every part of the civilized world where luxury abounds. In all probability, a single plant only of this variety was produced from seed, but it has been multiplied and perpetuated by layers, cuttings, &c. It is, therefore, the same vine, every layer be-

ing only a part of the old plant. Our common Strawberry belongs to the class lecosandria, containing stamens and pistils on the same plant and in the same calyx. In some of the varieties, staminate or male plants as they are called, are produced. These, when transplanted, as far as my observation goes, never produce pistillate, or fruit-bearing plants. Thus, a bed of strawberries without any fruit may be perpetuated. One of our common shade trees in Charleston, with the ridiculous English name of "Tree of Heaven," (*Ailanthus glandulosa*) in its native country, China, belongs to the class Polygamia, viz: having male and female flowers in different parts of the same trees, or on different plants.

In our Southern States, all the trees of this species I have examined have become dioecious, viz: all the male or staminate flowers are on one tree, and all the fertile florets on another; thus throwing the plant completely out of its original class and order. The female tree bears many seeds which are pests in our gardens; I removed all the latter, leaving the former, and I now have the benefit of the shade without the annoyance of the seedlings. I have given these examples to show that the production of infertile varieties of plants is not peculiar to the variety of grass under consideration, and that when produced they may be perpetuated to the end of time by the roots or cuttings. I have not an opportunity at present of examining the seedless variety of the Bermuda Grass, but strongly suspect that it is a seedling variety produced from the Bermuda Grass, (*Digitaria dactylon*.)

The Rose bush which produces what is called the Green Rose, is a variety which originated from the seeds of the common Daily Rose. It has been known for fifteen or more years. It was produced, as I was informed, in Wilmington, N. C. I saw it in Columbia and had a plant in Charleston. In this case the seeds produced a variety, in which the stamens, pistils and petals were transformed into leaves, possessing the form of the rose, with the bright green color of the leaves. The petals of this singular production, were, in reality, no longer flowers, with the aiding properties of the petals of the rose, but leaves with the persistence and durability of the leaves of the Rose bush. This variety cannot be propagated by seed, for it bears none, but has been increased by the usual modes of budding, grafting, &c. The process in nature, in the production of this variety, is precisely the same as in this new variety of grass, and the extensive cultivation by tubers is similar to that of multiplying the plant by layers or by grafting.

The question, whether this variety of grass will, under any circumstances, be brought to produce fertile seeds, and thus restore to our cost the old and dreaded enemy, the Means Grass, is not positively settled in my mind; although my experience in all other varieties is in favor of its continuing just as it is at present, infertile but without the long runners of the Means Grass. I have never known varieties to return without an intertexture; nor can I conceive how an infertile plant, propagated from the root, can produce fertile florets by any mode of transplanting. I have, however, seen a single male in the male Ailanthus Tree producing male flowers, which, however, at present, as far as I could ascertain, bear seeds. An Ailanthus Tree of this transformed male variety which I saw in Charleston 40 years ago, and was the only tree of the species for 20 years afterwards in the city, threw out many shoots, which were transplanted. They all proved male trees, like the parent. Under any circumstances, should a straggling shoot produce fertile seed, contrary to expectation, the plant that has it may be easily removed. I am so far satisfied that this plant will retain its peculiarities and not return to the Means Grass, that I have concluded, through the kindness of my friend, Mr. PETERS, to cultivate a bed in my garden with it.

*All old subscribers of the *Cultivator* will remember that this is the grass spoken of by P. E. DUNCAN, Esq., of Greenville, S. C., at page 162, vol. 11, of this journal.—Eds.

It is not my intention to trouble you or your readers with any account of the product of this grass, or its mode of culture. This has, as I am informed, been done in your journal by various correspondents. The small field I saw planted at Mr. Peters' could not be exceeded in luxuriance. My experience, however, in regard to all grasses is in favor of good soils to produce a fine growth of any kind of grass.

As this variety has been very inaccurately named, and as it should be distinguished by some English name, which ought to be generally adopted, I would propose for it the name of *The Seedless panicled Millet*. I would further suggest that the Means Grass be called by its true name, *Panicled Millet* (*sorghum halapense*). This will avoid much confusion. May I not farther suggest a hint that our cultivators, in future, do not inflict on the public any new names for true species—such as Rescue Grass, Musquet, Mysterious Grass, Texas Oat Grass, &c. Varieties they are fully entitled to name, but the designation of species, to avoid confusion, should be left to the Botanist, whose examinations will enable him to find that, in almost every case, the plant has been named already, and that, therefore, a new name would only create perplexity and confusion.

A thought has occurred to me whilst penning this communication. Our gardeners and cotton planters have let fall some rather rough expressions in reference to the so-called Means Grass and those who introduced it. They good-naturedly, I trust, and in half a joke, threatened to lynch any man who would introduce it into their neighborhood. All this while, my good friends, Providence, who is better to us than our tears, was preparing the way to give you, through the medium of this doomed plant, one of the most valuable summer grasses, as you admit, that you have ever cultivated. The Wild Crab and Wild Pear which I have plucked from their native woods, are so acrid that they will screw up the mouth like a green persimon. They, however, were organized to produce varieties, and are the parents of all those delicious varieties of Pears and Apples, which were recently exhibited at your Fair at Atlanta. So in regard to the Potatoe, the Carrot, the Cauliflower and all the other cultivated plants. So, also, in domesticated animals and poultry, as the Merino Sheep, Cashmere and Angora Goats, Woburn and Suffolk Pig, Bremen Geese, Aylesbury Duck, the Shanghai Fowl, &c., whose wild originals still existing, abundantly testify. God is the creator of species, and he requires of his intelligent creatures that they cultivate and improve them, that they may minister to their support, their comfort and happiness.

Inasmuch as I am inclined to believe that we at the South are, or soon will be, in possession of a sufficient number of summer grasses to furnish us with an abundance of pasturage and hay, a very important desideratum is to find one or more species adapted to winter pasturage. I intended when I commenced this letter to have furnished you with a few notes on the winter grasses that are now or may be cultivated with a prospect of success. But, as I have already swelled this letter to an unexpected size, I will only give a list of them, with the true scientific and English names of those which it is important for the farmer to know, at the same time pointing out the erroneous and unnecessary names, which only create confusion. The climate and soil of our Southern States is in the higher and mountainous parts of the country assimilated to that of the Northern States, and is favorable to the culture of wheat, &c., and will in time become a grazing country; whilst our lower country, which is best adapted to cotton and rice, present a different soil and climate: hence some of the grass, such as Clover, Timothy, &c., are less adapted to the sandy soil and warmer climate of the seaboard. The following are the Winter grasses which at present occur

to me. Having, however, no immediate access to Botanical books, I am obliged to draw on a fading memory to aid me in the recollection of their true names and cannot speak with a certainty of perfect accuracy:

English Names.	Classical Names.	Names that should be omitted.
1. Barley, Rye, Oats, Wheat.		
2. Lucerne.	<i>Medicago Sativa</i>	French Clover.
3. Spotted Medick.	<i>Medicago al-alata</i>	Yellow Clover.
4. Chilian Lucerne.	<i>Medicago</i>	A falla
5. Swiss Lucerne.	<i>Medicago Falcata</i>	Yellow Clover.
6. Common Red Clover.	<i>Trifolium Pratense</i>	
7. White Clover.	<i>Trifolium Repens</i>	
8. Orchard Grass.	<i>Dactylis Glomerata</i>	
9. Short Awned Horn Grass.	<i>Ceratobolus brenniana</i>	Rescue Grass.
10. Wild Rye. Line Grass.	<i>Elymus Virginicus</i>	
11. Italian Rye Grass.	<i>Lolium Policum</i>	
12. Common Rye Grass.	<i>Lolium Perenne</i>	
13. Meadow Soft Grass.	<i>Holcus Lanatus</i>	Musquet Grass.
14. Lewis Grass.	<i>Stipa Sparta</i>	Musquet Grass.
15. Meadow Oat-like Grass.	<i>Triticum patens</i> <i>Tory. Avena patens</i> <i>tris, Michaux. Avena patens, Elliott.</i> <i>Bolboia demi tati.</i>	
16. Hard Grass		
17. American Canary Grass.	<i>Phalaris Americana</i>	
18. Common Oat like Grass.	<i>Arrhenath rumavan</i> <i>a eum.</i>	Texas Oat Grass, Tall Oat Grass, Mysterious Grass, Musquet Grass.

Several of my friends near Charleston, as well as myself, are now cultivating the Short Horn Grass, the common Oat Grass, the Lewis Grass and some others, to test their adaptation to our soil and their productiveness. The notes I have made on the Winter Grasses adapted to our Southern climate will perhaps be worth publishing, when the result of these experiments are ascertained; at present they afford nothing of much value. I will just observe in regard to the kinds noticed under the head of No. 1. They were productive in the order above stated—the Barley furnishing the greatest product of green food. 2. The Lucernes have succeeded better with me than the Clover. 4. The Chilian Lucerne, if I should judge from a single gigantic specimen in my garden, will probably be found to be so marked a variety that I would recommend its culture, since I regard it as having become naturalized to a climate somewhat similar to our own. 9. Some gentlemen have written to me to inquire whether the Short Awned Horn Grass was the same species as that called the Tall Oat Grass of Texas. They are very distinct and widely separated species. 13. The Meadow Soft Grass, notwithstanding it succeeded in a few places in the South, generally dies out about the second season—unless it is planted in the garden and the roots separated in spring, by which mode I have sometimes preserved it for several years. SINCLAIR says: "Cattle prefer almost any other grass to this; it is seen in pastures with full grown, perfect leaves, while the grasses that surround it are cropped to the roots. Its nutritive matter consists entirely of mucilage and sugar, while the nutritive matters of grasses most liked by cattle are either sub-acid or saline"—(Hort. Gram. 164. No. 14.) Lewis Grass (*Stipa Sparta*). This species has, in some way, been lost sight of by those who have written to me on the subject of grasses. The specimens they sent to me supposing that they were Lewis Grass were all of one species, viz: The Common Oat like Grass. The specimens, however, given to me by Mr. Cloud at Columbia, S. C., at the meeting of the Society and Legislature in the autumn of 1853, were not the Oat Grass. I have, at this moment, lying before me the very bundle of this grass with Mr. Cloud's name attached. This is the species I have referred to, *Stipa Sparta*. Its history is as follows:—The *Stipa Juncica* is a native grass of Europe. MUHLBURG describes it as inhabiting Canada, (p. 182). It is given in EATON (p. 57.) NUTTALL, in his travels in Missouri, found what

he supposed to be this plant, and thus describes it:—"The *Stipa Juncea* of Europe (as described by LINNÆUS) with the awns nearly straight and without pubescence." The African variety figured by DESFONTAINS, has twisted pubescent awns, and blunt seeds; the Missouri plant has a nerved, chaffy, loose calyx filiformly acuminate to more than double the length of the seed, which last is acutely stipitated, almost one third of its length, the stipe pubescent, the seed rather obtuse, distinctly articulated to the awn which is smooth and slender, scarcely contorted and nearly half a foot in length. This species grows very commonly on the grassy plains of Missouri." A specimen of this grass was found in herbarium of our famed pioneer traveller, LEWIS. Believing that it was not the European species, I sent to Prof. GRAY, of Boston, one of the very specimens kindly presented to me by Mr. CLOUD, at the same time stating that I propose calling it *S. Lewisii*, Lewis' Grass, after the first discoverer. He agreed with me about its being the Missouri plant described by NUTTALL, and also that it was the same species as that found in LEWIS' herbarium, but informed me that it had already been described by TRINIS under the name of *Stipa Sparta*. I have found the Latin description in "KUNTH's Enumeratio Plantarum Tom. I, p. 179." He draws the following distinction between the European and American species:—"The American species has the glumes twice as long as the perianth. The European, (viz: *Juncea*) has the glumes longer than the perianth by a third. The awns of the American is more than three times as long as the glumes while the European has the awns six times as long as the glumes." I must here add, however, that Prof. GRAY has some doubts whether the European and American species may not yet be found identical.

The difference between this species and the Oat like Grass can be detected at a glance by the very long awns of the LEWIS' Grass, which are fully five times the length of the Oat like Grass. Indeed, they belong to different genera. No. 16 is an admirable pasture grass, relished by cattle above all other grasses. It succeeds admirably at Mr. O'HEAR's cattle farm, and on our whole seaboard. It is, however, a short grass, only fit for grazing, and is said not to flourish beyond the atmosphere of the ocean. No. 17. This species has for many years existed on the plantation of Mr. MATHEWS, on James' Island. He represented it as green in winter and an excellent winter and spring grass. ELLIOTT says: (vol. I, p. 102) "This plant appears to be worth cultivating as a spring grass. I have seen it on James' Island in a dry soil." No. 18. *Arrhenatherum Arenaceum*—Beam's Common Oat like Grass—(LINDLEY's System, p. 305.) *Holcus Arenaceus*, Scop—(English Botany t. 813.) *Avena elatior*, Linn. *Avena elatior*—(MULLENBURG's Catalogue, Dr. EATON's Botany, p. 48.) *Arrhenatherum avenaceus*—(HOOKER's British Flora, p. 39, Dr. GRAY's Botany of the Northern States.) This is one of the species cultivated by Mr. STANFORD, Mr. CLOUD, Mr. PETERS and others, and highly recommended. By some Botanists it has been supposed to be a species differing from the European. I have compared specimens, with those from Pennsylvania—those found in an uncultivated state on the borders of the Santee, and also those sent to me by Mr. STANFORD, and can find no characters by which they differ. One Botanist, I am informed, has expressed an opinion, that, although of the same species, it may have originated in America, from the fact of its wide diffusion. To this may be remarked that we have no evidence that the same species has in any instance been created in two widely separated localities. The fact that this species is only naturalized in a few localities in the Atlantic States and the rapid manner in which seeds are spread will easily account for its general extension, and leads to the conclusion that it was brought to this country

among other seeds. It was, therefore, a rare species in Pennsylvania in the time of MULLENBURG, and is expressly given as cultivated—(p. 183). I regard it, therefore, as the European species transplanted at an early period into America, having become naturalized, and flourishing most in soils best adapted to its growth, more especially in the far West.

I regard Nos. 9, 14, 17 and 18 as winter grasses that are deserving of the careful cultivation and the patient experiments of the Agriculturist. In conclusion, I cannot but express the hope that it may not be regarded as too presumptuous if a gentle hint should be given to planters not to condemn hastily any grass if it has not succeeded on the first trial. Soils and culture differ. The man who, with a poor, badly cultivated soil, should pronounce the cultivation of Corn a humbug, because he has only succeeded in making 3 bushels to the acre, might be regarded as having pronounced a hasty decision.

Yours truly, JOHN B. MAXIM.

Wadeson, Whitfield County, Ga., Sept. 11, 1855.

Charleston, S. C., Oct. 3d, 1855.

EDITORS SOUTHERN CULTIVATOR—Having arrived at home and received the proof sheets of the above, I have had leisure as well as an opportunity of consulting authorities, and comparing specimens, I believe my designation of the species as given above, which was nearly all I intended in the article, will be found correct.

If I have not already trespassed too much I will yet crave your indulgence whilst I make a few suggestions that may be of some benefit to farmers, more especially those who are desirous of cultivating the grasses for pasture and hay, and of renovating their soils by a rotation of crops.

1. *Preserve specimens of the various grasses*, in order that you may, at all times, know what you are cultivating, and that you may be saved from imposition or other disappointments. For this purpose prepare a volume of folio size, with alternate leaves of soft, spongy and common writing paper. On the soft paper, on the right, attach your specimens of grasses. On the top border, the breadth of the paper, paste a strip of writing paper an inch broad, on which the name of the genus should be written. The specimen having been pressed for a week between several folds of spongy paper and changed once or twice into dry paper, must now, in its dried state, be carefully pasted on the right page of your book—a strip of paper with the name of the species attached fastens the stem of the plant to the paper near the bottom. On the opposite, or left side, containing the writing paper, you make your notes on the species—your experiments in cultivating it, &c. The Book must be paged. An alphabetical index of each genus directs to the page where the specimen can, in a moment, be referred to. I have seen in England, Germany and France small volumes in which the various grasses were pasted on one side of the page, and on the other, printed descriptions and directions, in the language of the several countries, giving the names, qualities and mode of cultivation. A work of this kind, like that of RAVENEL, on the Musci, would be invaluable in our country.

2. *Let the Southern grower Grow So.* This will save them not only expense, but secure them against many impositions and disappointments, as the seeds, when old, have lost their vegetative power. There is in raising our own grass seeds another advantage which appears to have been not a great measure overlooked. You will, in this case, by successive sowing of Southern grass seeds, produce varieties of grasses springing out of European or Northern species, adapted to your own soil and climate. Our pomologists of Carolina, Georgia and Alabama—the two brothers S. MERRILL, VAN BUREN, Dr. BALD-

GRAPE CULTURE IN NORTH CAROLINA.

EDITORS SOUTHERN CULTIVATOR.—I see by the August number of your much esteemed paper, an inquiry relative to Grape Culture in the South, over the signature of "J. S. G." If you will permit me to give him my views on the subject, through your valuable paper, I will endeavor to do so, if you think any benefit will be derived from them. I have been all my life working in and attending to my father's (S. WELLER) Vineyard and Nursery, and since his death I have taken the management thereof.

He (J. S. G.) first wishes to know what kind of Grapes are best adapted for the South? I answer, unhesitatingly, the Scuppernong Grape Vines are the best, for the following reasons:

1st. This vine is the most thrifty in growth, on any kind of soil, poor or rich. After they get fairly started, they will grow on ordinarily good soil, upon a scaffold 10 feet high, and will cover two, three or four feet, all around, in one season, owing, almost altogether to the strength of the soil.

2d. They will produce at least three-fourths more grapes on the same land than any other grape vines I have ever known, or of which I have ever heard; having tried from 150 to 200 kinds, including a good many foreign kinds; besides, I have known one vine to produce enough grapes to make 50 gallons of wine.

His second inquiry is, what time is best for planting? There are different opinions on this subject; some think autumn, some spring; but I think, as they are very hardy vines, enduring a great deal of cold without receiving any material damage, that any time between fall and early spring will do. It is, however, not best to wait till the sap is too far gone when planted in the spring to admit of their receiving enough to promote growth, &c.

The third inquiry is, what period from planting to producing? That is somewhat owing to the strength of the soil; if the soil on which they are planted is good, they will commence producing in two or three years, and increase prodigiously every year afterwards.

The fourth inquiry is, how are they to be cultivated? Set them out about 20 feet apart, and while they are young, beans, cotton or any thing of that kind can be cultivated with them till the vines have obtained too large a size to admit of anything being cultivated underneath. By that means, the vines will be cultivated sufficiently, but care should be taken to keep them clear of grass and weeds during the whole summer. After they become too large to admit of anything being cultivated with them, keep them clear of grass and weeds as before stated by a plow that will go no deeper than to scarify or root up the grass and weeds.

Prune them while young, till the body gets to be about ten feet high, then let them branch off in every direction without pruning. I make a variety of kinds of wine from the Scuppernong Grape, that sells from one to four dollars per gallon, according to quality. It always sells better than wine made of other grapes; moreover, the Scuppernong wine is in greater demand in the South than any other wine made of native grapes. Hoping I have answered Mr. "J. S. G.'s" inquiries satisfactorily, I subscribe myself

Most respectfully,

JOHN H. WELLER.

Brinkleyville, N. C., Sept., 1855.

VERMIN ON ANIMALS AND TREES.—It is stated by Raspail, one of the best French chemists, that a solution of aloes, washed over the trunks and branches of trees with a brush, will destroy all vermin on plants and trees.

OUR LATE (GEORGIA) FAIR.

TO CHARLES QUERY, ESQ.:

My Dear Charles—Your esteemed favor is at hand. Many thanks for the box of dried Figs, and the toys for the children. I suppose you cured the figs by the recipe I gave your lamented father a few years ago, viz.:—By boiling the fruit when nearly ripe for a few minutes in syrup, and drying on tin sheets in the sun.

I know not how I can answer your letter better than by replying to your several questions as they occur.

You ask me if the exhibition was not a poor one, compared with those we have had in former years. It was so in some respects. The early season at which the Fair came off, excluded from the grounds what should always be a prominent feature in an Agricultural Exhibition. I mean the Field Crops. It is very gratifying on such occasions, to see bags of Corn, Potatoes, Wheat, Rice and the like, challenging attention. The exhibition of Stock also, was not as large as usual. For this we are indebted, in a great measure, to the unaccommodating spirit displayed by the managers of the State Road, who charged freight on all animals brought over that Road. Of course, where the freight amounted to more than the value of the premium, and owners were not flush of money, both the people and the stock stopped away, thus lessening our dividends on the only Rail Road in which we have any interest. For this cause, and this alone, a number of us, Democrats, determined not to vote for JOHNSON at the late election. Nor will we ever vote for a man who is blind to the Agricultural interests of the country.

You ask why I did not show my "fine bull, Nero?" For a good reason. I think Nero the best bull in the Southern States, and you think so too; and so think all the gentlemen who have bred from him. His form is perfect and his pedigree satisfactory to all the Devon fanciers in our neighborhood. But Nero's father, old "Jugurtha," you will remember, was a very docile animal, always poking about the kitchen door and sticking his nose into the pots. On one occasion, he got his nose a good deal black. Now, it so happened that "Cleopatra," the mother of Nero, was in a "certain way" at the time, by which accident the black nose of Jugurtha was entailed on my bull. This statement I had from the lips of Gen. ALBERT GOTTIE, who bred Nero, and you know that there is not a man of stricter veracity in the county. The bull might have been ruled out on account of the dark appearance about his nose, which would have injured the reputation of the stock of fifty persons who have bred from him.

It was nothing but the apprehension of the same thing that kept SIMON KICKLIGHTER from showing the finest Devon Cow I have ever laid my eyes on. With her first calf, she gave fifteen quarts and a half pint of the best milk—measured after the froth had fallen. But his cow has a little white about her udder, which mark, the books tell us "is sometimes passed over" in Devonshire; but which we know would condemn a cow at our Fair. He would not send his Durham Cow, because he expected Col. WADE HAMPTON, of South Carolina, to take the first premium, and no premium was offered for the second best.

You ask me why JOHN did not receive a premium for his Cabbages? There was none offered, and although some of the heads weighed 12 pounds each, he concluded that he would not travel a hundred miles and pay \$2 for the honor of showing a dozen heads of Cabbage. JOSEPH came to the same conclusion about his Beets. The truth is, the boys never saw the Premium List until a week before the Fair, or they would never have given so much attention to their vegetables.

JANE concluded that as she was going with her mother

she would take her jar of Apple Jelly along. She would not enter it for a premium, because none was offered. It was very gratifying to her to know that good judges pronounced it the best jar of Jelly on the table. The premium in that department was offered for the largest collection, and was contended for by only two persons.

You wish to know why I did not purchase the Camellias and Orange Tree for Susan? There was no collection of Green-House plants on the ground. There are no Green-Houses in Atlanta, and the premium offered for plants did not justify persons in bringing them from a distance. I regret this as much as you can, for I did not only lose the opportunity of purchasing, but I was mortified to see the exhibition shorn of one of its most attractive features.

The Fowls you ordered, I could not procure for love nor money. Instead of the long streets of coops which we have been accustomed to see, always thronged with admirers, there were but a few coops, very much out of sight, and only an indifferent collection of fowls altogether. There was but one premium offered in that department, and that was for the largest and best collection of fowls. Of course, all expected Mr. REDMOND to lay his hand on that premium. But the premium was so small that it would not have justified the expense he would have been subjected to, in making up a creditable collection; and every one who is acquainted with the gentlemen knows that he would not be content to show a falling off, in a field in which he has won so many laurels.

You ask me what sort of Committees we had? I saw but little of them. Some, I know, were composed of intelligent gentlemen, who understood what they were about, as was very evident from their Reports. Against others I heard great complaints. The Report of one of the Committees was so unsatisfactory that another was appointed to undo its work.

I heard a Report read, in which a low-country product was denied a premium, on the ground, as was alleged in the Report, that it was unfit for up-country culture. Thus, proving that the Committee was ignorant of the object of the Society, which is to develop all the resources of the Southern States, and this Report was made with a number of premiums for low-country products staring them in the face (!)

In some respects, our Fair exhibited a decided improvement on every one we have had. The display of Fruit was the best ever seen in Georgia. Grapes, Pears, Apples, Quinces, Peaches, Pomegranates, Olives and Figs were shown. This department of the Exhibition, for variety and excellence, would have been creditable to any Pomological Society in the country. Several new Apples of great excellence were presented and named, and a very valuable Winter Pear.

Our Secretary, Dr. J. CAMAK, of Athens, has proved himself to be a gentleman of system, energy, and judgment. Under his administration, the grounds were provided with a strong and vigilant police. The articles in the several departments were admirably arranged, and under the care of polite and efficient officers.

Our next Fair will be later in the season; in the mean time, the Premium List will undergo a complete overhauling, and, no doubt, will be made encouraging to a much larger class of exhibitors. The Executive Committee, I am informed, will take measures to secure intelligent and efficient Committees for every department. In short, no trouble will be spared to give satisfaction to all parties, and to make our exhibitions better and better every year. Make arrangements for a large show next year. Your family will hardly be in the same plight again so soon. Expect me over in a few days.

Yours sincerely,
TIMOTHY TUGMUTTON.

Briar Patch, Ga. Oct., 1855.

A NEW USE FOR ZINC—ITS PRESERVATIVE PROPERTIES.

It has always (says the *Maine Farmer*) been an object to prevent the decay or rotting of wood, cordage, of cloth, and such like articles. This decay, or rotting, is occasioned by the soluble matter contained in the article. In wood the albuminous matter &c., if in a condition to be acted upon by a proper degree of heat, and a supply of air, occasion decay speedily; any process by which these soluble ingredients may be driven off, or changed in their character, will prevent the decay, and of course insure a longer continuance of its use. In fact, if decay from rotting or decomposition could be wholly prevented, such articles would continue in use until wholly worn out by the abrasion and continual separation of particle from particle, by the friction and blows it receives while being used.

Several schemes have been recommended by which the articles desired to be preserved, have been filled with chemical agents, the action of which with the albumen, or other soluble matters, was to change them into insoluble and unfermentable material. Kyan, an Englishman, recommended some years ago, the impregnating such things with a solution of corrosive sublimate, which is a chloride of mercury. This would accomplish the purpose, and the process is known by the name of "Kyanizing." It is, however, so expensive that it is not very often used. Hence, substitutes have been tried—such as solutions of blue vitriol, of white vitriol, and of copperas, but with not so complete success as with the chloride of mercury.

More recently, Sir William Burnett has been experimenting with chloride of zinc, and found it to be equally as good as the chloride of mercury and a great deal cheaper. It not only prevents rot, mildew and combustion in wood, canvass, cordage, cotton, woolen, &c., &c., but is very excellent for purifying and destroying the poisonous odors of vaults, cellars, hospitals, chamber vessels, and the like. We quote the following statements from the *American Traveller*:

"We understand that convinced of the great utility of the chloride of zinc, extensive preparations have been made for its manufacture by the Roxbury Chemical Company, and the Manufacturing Companies at Lowell are erecting extensive apparatus for the purpose of Burnettizing timber.

The following are stated as some of the peculiarities and advantages of Sir William Burnett's patent process: It hardens and greatly improves the texture of wood. It enters into permanent combination with the ligneous fibre; and does not come to the surface of the wood by efflorescence, like other crystallizable salts; and no amount of washing or boiling in water will remove the chemical compound so formed. It preserves wood and other articles from the adherence of animal and vegetable parasites, and also from the attacks of insects. It completely preserves wood from wet and dry rot. It renders the wood perfectly unflammable, when used of a certain requisite strength. The effect of the preparation on canvas, cordage, cotton, &c., is to preserve these articles from mildew and rot; it renders them more pliable, does not in the slightest degree discolor them, and washing or boiling in water will not remove the combination from their fibres.

"Woolen prepared by this process will be preserved from mildew and rot; it will not be attacked by moths; and washing or boiling will not remove the combination from it. It is used for the preservation of anatomical subjects; and green hides are effectually preserved from decomposition, by being subjected to the process. It completely neutralizes the offensive effluvia arising from bilge-water on board ships. Iron or other metals are not oxidated or dissolved, either when immersed in the so-

lution, or imbedded in wood prepared in it. It also preserves paper.

"In regard to the non-inflammable properties which it imparts to wood, it has been found that the softest timber is most effectually acted upon for the purpose. It has been found very valuable for railway sleepers, &c, from the durability which it imparts. Cordage, so prepared, has been found to be one-twelfth and canvas two thirds stronger than the unprepared, whilst it also makes sails softer and lighter to work."

DROUTH--DEEP PLOWING, ETC.

EDITORS SOUTHERN CULTIVATOR—The past year of protracted drouth, elicits inquiry into the better mode of culture and the reason therefor. The one, though not as important as the other, has importance enough to demand thought, for man, unfettered by a blind following of practice, or by indolence, must inquire, "Why is it correct that such a policy is pursued?" "Why not the opposite practice?"

That deep and thorough tilth, a perfect pulverization to the depth of plowing, and that as deep as is possible, is the best practice, few will controvert. A perfect tilth, and as deep as can be effected, may be more costly than prudence or economy will warrant, may be self-evident, though not in opposition to the fact that it is best as to product. A full and free exposure to sun and air is necessary to secure healthy growth and perfection in animal and vegetable life, is equally true; the exception, some plants do best in a shade; some animals, females of our race for instance, can live out a puny and sickly existence to old age, are but exceptions; and so exceptions may be brought up as to the product from tilth and cultivation. When land is thoroughly drained, and with a perfect tilth of over two feet it may be expected to resist drouth, and superabundant water better than the opposite—that is, will produce most, wet or dry. Because roots of plants have a wider range to such food, more moisture in dry weather and less water in wet weather, the surplus of water sinks down and runs off, leaving the upper soil porous and permeable to air. Some plants grow best in water, but an exception to the rule.

The question, from whence comes the moisture in a long protracted drouth of months? has not yet been settled, some affirming that "moisture rises" others that "moisture falls." If the practice be correct, and returns prove it, the many, who care only for the profit, seem to be indifferent. That truth lies between, we will undertake to affirm, and if forced to either horn of the proposition prefer moisture deposited from the air.

To the reasons: In digging a hole for a post in the month of August, near three feet deep, the earth is hard and dry; equal quantities of earth and powder mixed will not prevent the latter from burning as if in the air—if grains and powder be in a just proportion, the flash is immediate. If this is so, where is the moisture to rise? On the other hand, fill a decanter with ice water; stop close and wipe it dry; place it in a room 18 feet square on a table; the day clear, hot and dry; in an hour, or less, the decanter will be wet with dew, and the moisture will run down its sides and wet the cloth. Whence proceeds this moisture? Just so may it exist in the earth, if the latter be finely divided so as to admit air, for air will pass in—a vacuum in Nature being an absurdity.

By plowing deep and pulverizing as thoroughly as plow, harrow and roller can do it, the earth does not become heated so deep, and cools off earlier at night, becomes cooler than the surrounding air; thence acts as the condenser, as in the decanter instance, and causes the dew point to be reached earlier and a greater deposit of

dew. At this date, the dew on cotton is so great that it drops from every leaf as if a light shower of rain had fallen. This shows how much moisture is in the air. Land deep and thoroughly plowed, may not show as much moisture on the surface as would a plank or a brick, because the light and porous top soil receives all heat readily—why we should keep light earth around plants in the spring—but the under surface being shaded and cooler must condense more moisture. The finer the soil, the more air, and the finer the air tubes, though admitting of a greater elevation of moisture from below, also admitting of a larger deposit—the more cool surface exposed to air.

For a similar reason, a dense shade to land will preserve it moist longer (the land in proper tilth) and a deposit of fertilizing material from the air will also be a result. If a deposit be formed in caverns, in dark cellars sufficient to make the manufacture of saltpetre profitable, why not a deposit in land thoroughly plowed 12 inches deep? We know here that iron or steel instruments, knives, forks, &c., will rust from moisture, though securely enveloped in cotton, woolen or paper. Why not moisture in the air permeating this twelve inches of earth?

Yours with respect,

P. RIDEN.

Hinds Co., Miss., Sept., 1855.

THE CARBON OF PLANTS.

BY ROBERT NELSON, A. M., OF MACON, GA.

EDITORS SOUTHERN CULTIVATOR—From whence originates the carbon in plants? A question which is not propounded because the objects I am about to present are new; but because I know that I have things to advance which conflict with views heretofore adopted in agriculture. My object is, mainly, to inquire into the origin of that carbon which forms an elementary constituent of every plant.

It may be pre-supposed that no one will consider the plant capable of producing carbon or carbonous bodies, inasmuch as the whole field of scientific chemistry does not furnish a single instance where one elementary substance can, in any way, be transformed into another. It is, consequently, evident that the carbon of the plant must originate from its associations, whence it is absorbed by the plant and used for its nourishment. But, as we furthermore know that besides carbonic acid and humus, there is no carbonous bodies found in the associations of plants, that is in air, water and earth, the inquiry must, of course, be confined to this one point: whether it is the carbonic acid, or the humus, or both, that yield the carbon?

I will first speak of humus, and seek to answer the question, whether the plant can, in any possible manner, absorb humus from the earth? and then illustrate everything, for and against the supposition that humus is needed for the nourishment of the plant, that is, for producing carbon.

Can humus, or a humusate, be absorbed by the plant? This question must forthwith be answered in the affirmative, inasmuch as we know that the plant absorbs all such matter as is soluble in water when coming within the boundaries of its roots; and that humus, or humusates, are soluble in water. But I must here observe, that because a plant absorbs anything, it is not, therefore, a settled fact that it really needs what it absorbs for nourishment; on the contrary, there are several ways in which the plant may again abstract what it cannot use, and even return it into the earth from whence it was taken. No one will, therefore, doubt that the plants absorb a solution of humus, or a humusate, when dissolved in water; and now it only remains to inquire, whether humus and humusates do, in consequence of their carbon, tend to nourish the plant in.

such a sense as has heretofore prevailed respecting this subject.

We know that humus is produced by the fermentation of the constituent parts of vegetable and animal manures; and we also know that the plants grow luxuriantly in such soils as are well manured, and are, consequently, rich in humus. Our present inquiry, however, does not concern the favorable effect of manure and humus on vegetable life in particular, but we are simply to inquire whether the carbon of humus is used for yielding the carbon contained in plants or not?

The favorable effect of manure, and especially of humus, does not here prove that it is its carbon which produces this effect; inasmuch as humus contains many other things besides carbon, which might possibly be valuable to the plant. Humus, such as it is found in the earth, can give no aid in procuring carbon for the plants, or, more properly, the carbon in the plants is not received by them in the form of humus or a humusate; which we will now endeavor to establish.

We may sow seed in pure sand and be able to rear plants which, indeed, have not the power of developing themselves perfectly, but in which we, nevertheless, may trace a content of carbon, which can in no wise be attributed to the absorption of humus from the earth, just because there is none such in the earth. It might here be said, that the seed may itself generate humus; but if we even take this for granted, there will be nothing gained by it; for there is more carbon in the plant than there was in the seed originally. There must, consequently, be another source to the vegetable carbon, than humus. And as regards hyacinths, it is well known that the bulbs of these plants may, without humus, in mere water, be made to yield a profusion of leaves, stems and flowers, the carbon of which cannot have originated from present humus, and must, consequently, be taken from elsewhere. But in maintaining the fact that vegetable carbon must have another source than humus, we are not limited to such insignificant tests; on the contrary, nature, does, in this respect, offer us very considerable and proper proof. I mean our immense forests.

Let us imagine ourselves as being in a forest on sandstone rocks, where the pine attains to a powerful growth, and we shall here and there observe, in the cracks of wholly naked rocks, a strong pine-stem shoot forth, which is far from being rooted in humus soil. From whence, it will be asked, do these plants take their carbon? for there is no humus in the soil, or in every case so little, that its carbon does not amount to more than a few ounces, while the weight of the carbon in a single tree amounts to hundreds. Here, too, we must look for some other source to the carbon, for it cannot be humus. And, as it is with a single tree, so it is with forests of many mile's extent. The humus, which is there found in the earth, is evidently produced by fallen leaves, twigs and branches, and by the coppice, which grows at the bottom; all the carbon herein must, therefore, still be ascribed to the forest tree's content thereof; and now the question is asked: From whence have all the trees of the forest derived their carbon? The answer is now and ever: in no wise from the humus of the soil; for the forest, instead of decreasing, increases in humus, by means of the vegetable extension. Consider, moreover, the meadows. What an amount of carbon is annually taken away in the form of hay, and what are we then doing towards giving the earth restitution for the carbon of which we have deprived it, and which was present in it as humus? Perhaps some one will answer: that the grass-roots remain in the soil, and that humus is formed by their decomposition; so far so good! but from whence comes the carbon which these roots contain?

I have several times, in the vicinity of the Alps, wit-

nessed the mowing of grass, where the cattle could not reach it on account of the steepness of the place. These places, consequently, are yearly deprived of a certain quantity of carbon in the form of a hay, and are, in no manner, compensated therefor. This carbon must, according to the prevailing opinion, have been present in the soil humus. But it is not difficult somewhat nearly to determine the quantity of humus in the soil of these steep mountains. It could not be large; for everywhere the naked rock was visible. But take any number, however large, we are enabled to calculate how much carbon it contains, and it is clear as day, that if the carbon of the hay is derived from the humus, there must finally come a time when carbon will be wanting, because the humus is consumed, and with it the source of carbon dried up. If I now, taking such suppositions for granted, would have said to the shepherd, who went to his home with a heavy grass-burden, he whose father and grandfather already reaped in this place, and whose children and children's children will do the same thing; if I now said to him:—"Friend! you are annually coming down with a large quantity of grass; see that you carry humus up there, or you will soon have a sorry crop!" what would he have answered me? Sure, he would have at least considered me a fool. Every one would have agreed with him, and yet I strictly adhered in my remark to the maxim, that the carbon of the grass was owing to the humus in the soil.

Moreover, do not believe that the humus in such manure as we carry out into our fields, contains so much carbon as we annually take away again in the form of grain. It will undoubtedly seem so to some, who confine themselves to experience, from which they know, that he who manures well reaps well. And still they are mistaken! Here, too, the carbon of the crop exceeds the carbon of the manure—a fact which can, in no way, be doubted, inasmuch as it is founded on chemical analysis of both manure and crop. Thus, even if it is admitted that all the humus of the manure has relinquished its carbon to these plants, there must nevertheless be some other source of the carbon.

Direct experience, therefore, speaks against the idea of humus being used as such for the purpose of yielding carbon to the plants. But we may employ the same proof in still another way, and even admit, although contrary to the most decisive analyses, that the crop contains no more carbon than was found in the manure, or even less.

When humus, namely, either as such, or as a humusate, is to be absorbed by the plant in order to be decomposed and yield its carbon, then it must evidently be dissolved in water, inasmuch as according to experience solutions only of one or other body can be absorbed by the plant. But here we immediately meet with new inconveniences, while humus is dissolved with great difficulty only, and there being found no humusates which can easily be dissolved in the soil. For, even supposing that some soil may contain so large an amount of humus as to make its carbon more than sufficient for satisfying the plant's demand on carbon, then a quantity of humus corresponding to the requirements of the plant, will, nevertheless, need more water for its solution than the usual quantity of rain can yield. Thus, it is evident that the humus of the soil cannot, as such, be absorbed by the plant in a quantity sufficient for yielding carbon.

When, now, we are able to show that plants may produce carbon without the presence of humus in the soil; that, in many cases, the plant contains more carbon than the humus of the soil; that grains always contain more carbon than the manure; that two soluble humusates are not easily found in the soil; that such humusates as are with difficulty soluble, require for their solution more water than falls in the form of rain; and finally, that the humus of the soil, and, consequently, its carbon may become

more and more increased by means even of the vegetable kingdom; then we need no longer speak of the necessity of humus in vegetable life, so far as it is considered to furnish the plant with carbon.*

(To be Concluded.)

CULTURE OF COTTON—SELECTION OF SEED.

EDITORS SOUTHERN CULTIVATOR—I have been, for the last eight years, a regular subscriber and reader of the *Southern Cultivator*, and have all the volumes since that date either bound or on file for binding. And here let me record upon its pages my testimony that I have derived important advantages from it by way of agricultural education; and, in brief, that both I and my soil have been cultivated by it. When I began to plant Cotton I was entirely ignorant of everything appertaining to it. Endeavoring to learn by inquiring of others, I soon found such a mass of incongruous and incompatible opinions that I felt compelled to rely mostly upon observation for what I had to learn. That course I adopted and still continue, finding frequent aid and encouragement in the pages of the *Cultivator*. I have been planting twelve years, and as yet have communicated but little of my experience. Soon after I began to learn, 'my fingers began to itch for the pen' to tell, through the Press, what appeared to me of importance. But second thought suggested: "Wait a little, perhaps it is not new, or perhaps it is the exception—not the rule. Think more; try again. I'm o'er young to teach yet." So the editor, the printer and the public have been spared.

Some conclusions, my observation and reasoning have brought me to, that I think cannot be too often or too urgently presented to the minds of Cotton planters.

Second to nothing else, in my opinion, is the necessity of purifying and keeping distinct each variety of seed planted. I am satisfied that to obtain a full crop for a succession of years, it is not only necessary to adopt the best varieties, but to exclude all worthless varieties, so that every plant may contribute its full share and quality of staple. This is the only means of bringing each variety to a practical test as to the quantity and quality of staple, and their adaptation to different kinds of land and different parallels of latitude.

It is, perhaps, also possible to avoid, in a great measure, some forms of disease. It is not yet ascertained how the disease, of late years so destructive, called the *Rot*, is propagated. Perhaps a tendency to that disease is hereditary, like consumption, lurking in the sap out of which the tissues are organized, till the plant arrives at a certain degree of maturity when it is rapidly developed by a few days of favoring weather. If so, it may be exhausted or at least kept at bay by selection. I have ascertained that the type of stalk, of maximum productiveness, may be improved by selection.

For ten years, I have not planted a single crop except from carefully selected seed. I have done this, looking for remuneration solely to the increased yield which I expect, and in which I have not been disappointed. I have tried almost all the "fancy," or, "crack" seed that have in

various ways obtained an ephemeral fame; but have confined the principal part of my crop to two varieties, to which, since 1850, I have added a third, which I esteem very highly as an early opener, late grower and great bearer. I have given it the characteristic name of "Crowder," for it bears crowding on the land; it crowds the squares and bolls on the stalk; it crowds the planter to early and rapid picking, and, finally, crowds out a crop. The Prolific Pomegranate is my other favorite variety. This cotton I have planted and kept very pure for several years, under the name of "Olive," which name I had given it for my own convenience before it was known by the name of Pomegranate, and which I prefer only because it is short and easy to speak. My other variety is Mastodon, of which I plant a small portion of my crop every year for late picking, and do not pick a lock of it till I have picked every boll of the other kinds. I then, generally in January, gather it without pains, getting good weights; pass it through a very common gin, and sell it in New Orleans for from twenty-five to fifty per cent. more than any other cotton. These three varieties of cotton I have in unusual purity; and as the result of my pains, my stalks are now loaded and bowing down with bolls, notwithstanding I have been visited with most unprecedented drouth the whole season, and plant on Prairie land twenty-five years under hard cultivation, without manure. It would be hard to imagine a more intractable soil than mine, or one more dependent upon seasons; yet my average crop, for a series of years, has been a standard bale (400 lbs.) to the acre, and ten bales to the hand, made picked and ginned without help. I do not boast of this result, as I am confident it might be surpassed with my seed, on other lands in my immediate neighborhood. But taking the land and other circumstances into view, it points clearly to the advantages to be derived from long purified seed. I am frequently asked why I do not sell my seed? and I generally reply: that there has been so much humbuggery in Cotton seed that I do not like to take the trouble to bring my seed into notice. In short, that Cotton seed will not sell now at speculative prices, and to sell them at merely remunerative prices, costs more than they come to.

I have been told that there are many large planters who, if they knew the value of my seed, would be glad to furnish themselves at reasonable prices every year, or at least, every two or three years, as they could not give so much care and attention to selection as I have done. I am unwilling to enter the list of cotton seed speculators with a long array of certificates and recommendations; but will simply say that I shall keep the three above named varieties pure for my own use; and if any one wishes to begin selecting with seed already long selected and very pure, he can have them at a price that will make them cheap to him. I wanted to say something more upon the type of the cotton plant, but, having already trespassed upon your space too far, must defer my remarks for the present, but will give them, if you request, at some future day.

A. W. WASHBURN.

Yazoo City, Miss., 1855.

[Let us, by all means, hear from you on the "type of the cotton plant."—Eds.]

TO KEEP MILK SWEET.—A. Boyd, a correspondent, informs us that he has practised a peculiar method with much success, preserving milk sweet in the pans. It simply consists in placing a piece of new hammered iron, or three twelve penny nails in each tin pan, then pouring the warm milk on them. He believes that electricity has something to do with producing the result. He had tried many experiments before he hit upon this, which he found to preserve the milk sweet for a longer time than other plans tried by him.—*Scientific American*.

*The utility of humus is, therefore, limited to two quite essential points: (1.) That it loosens the earth by means of its lightness and friability, so that the roots of plants may the better spread therein; and (2) that it is, as it were, a store-house, from which the plant is gradually supplied with carbonic acid, together with the nourishing salt-solutions.

PREMIUMS

AWARDED AT THE FAIR OF THE SOUTHERN
CENTRAL AGRICULTURAL SOCIETY, HELD
IN ATLANTA, GA., SEPT. 10-15, 1885.

1st. FIELD CROPS.

[NOTE.—The Premiums in this department are to be decided by certificates, at the meeting of the Executive Committee, in Atlanta, December 20th, 1885.]

2d. SAMPLES OF FIELD CROPS.

J. T. Payne, Cobb co.; best Bread Corn,	\$10
Wm. Wright, DeKalb co.; best Stock Corn,	10
M. A. Cooper, Elowah; best samples of Wheat, 1882,	5
Feb. 55,	
Daniel Johnson, DeKalb co.; best Yam Potatoes,	5
(white)	
J. Merritt, Cobb co.; best bushel of Oats,	5
J. F. Green, Gordon co.; best bushel of Rye,	5
E. T. Shepherd, Muscogee; best bushel of Barley,	5
J. B. Gordon, Troup co.; best bushel of Irish Potatoes,	5

FRUITS.

Jarvis Van Buren, Habersham co.; best and largest collection of table Apples,	\$10
Jarvis Van Buren, Habersham; best collection of Southern Seedling Apples,	10
W. H. Thurmond, Atlanta; best late Southern Seedling Apples, (Oconee Greening)	5
H. Camp, Newton co.; for beautiful Apples, (a special premium),	10
Rev. H. L. Deane, Griffin; largest and best collection of Pears,	10
J. Van Buren, Habersham co.; largest and best collection of Southern Seedling Pears,	5
W. H. Thurmond, Atlanta; best single Seedling Pear,	5
J. Van Buren, Habersham co.; best Quinces,	5
W. H. Thurmond, Atlanta; best collection of Native Grapes,	5
Capt. H. Lyons, Columbia, S. C.; best foreign table Grapes (Black Hamburgh)	5
Capt. H. Lyons, Columbia, S. C. best foreign Wine Grapes, the Muscat of Alexandria,	5
Charles Axt, (a special premium) for successful cultivation of Grapes in Vineyard,	25

FRUIT TREES, PLANTS, &c.

D. Redmond, Augusta; greatest variety of showy ory plants, 81 kinds,	\$5
Rev. R. Johnson, Atlanta; largest collection of Orange Orange plants,	10
D. Redmond, Augusta; largest and best collection of Osier Willow,	10
W. S. Yates, Augusta, (a Blind Man); for the best Osier Baskets,	5

HORTICULTURE.

Rev. R. Johnson, Atlanta; greatest variety of garden Vegetables grown by one person,	\$10
Rev. R. Johnson, Atlanta; for a new Vegetables, (Japan Pea)	5
Mrs. G. W. Fish, Oglethorpe; largest collection of garden Seeds,	10

FLORICULTURE.

W. H. Thurmond, Atlanta; best collection of Dahlias,	\$5
W. H. Thurmond, Atlanta; best collection of Roses,	5

3d. CATTLE.

First Class—Devons.

R. Peters, Atlanta, best Bull 3 years old,	\$20
W. P. Marden, Clark co., best Bull 2 years old,	10
J. W. Watts, Cass co., best Bull 1 year old,	5
R. Peters, Atlanta, best cow 3 years old,	10
R. Peters, " Heifer calf 6 months old,	Plate
R. Peters, " Bull calf 6 months old,	Plate

Second Class—Durhams or Short Horns.

J. C. Young, Cass, best Bull 1 year old,	\$5
J. C. Young, " Cow 3 years old,	10
J. C. Young, " Heifer 1 year old,	Plate
J. W. Watts, " Bull calf 6 months or upwards,	Plate

Fat Cattle.

E. Parsons, Atlanta, best single fat Steer,	\$25
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4th. HORSES.

First Class—Horses of All Work.

P. G. Morrow, Walton co., best Stallion over 4 years old,	\$20
T. Thompson, DeKalb, 2d best Stallion	Plate
B. F. Harris, Richmond co., " 3 years old	10
J. McWorter, Walker, 2d best Stallion	Plate
James Wilson, Cobb, best Colt 1 year old,	5
J. Carroll, Gwinnett, best Filly 2 years old,	5
J. McCarty, " 2d " "	Plate

H. Mitchell, " best Filly 1 year old,	\$5
B. F. Sigmund, Newton co., best Brood mare with colt, by her side,	10
Z. R. Jones, DeKalb, 2d best " "	Plate
H. R. Hannish, best Brood mare over 4 years	10

Second Class—Blood Horses.

J. C. Aycock, Cass co., best Colt 1 year old,	\$5
G. R. Ross, Fulton, 2d best " "	Plate
C. A. Hamilton, Cass co., " Filly 1 year old,	5
C. A. Hamilton, " 2d " " "	Plate

[NOTE.—Most of the Horses entered under this head were deficient in Pedigree, and were ruled out, under the strict rule governing this class. Exhibitors should attend to this matter.]

Third Class—Canadians.

A. Cook, Tennessee, best Stallion 4 years old,	\$20
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Fourth Class—Georgia Horses.

M. E. Hoggie, best Race Horse	\$10
J. W. Malony, Cobb co., 2d best " "	Plate
J. N. Hoggie, Marietta, best Saddle Horse	10
J. E. Trappe, Morrow, best Heavy draft Horse,	10
S. Morris, Marietta, 2d best " "	Plate

Fifth Class—Southern Horses.

H. T. Greenwood, N. C., best Race Horse	\$10
J. A. P. Clark co., 2d best " "	Plate
P. Domett, " 2d best single Race Horse,	10
J. R. Fowler, Cass co., 2d best " "	Plate
M. E. Hoggie, Atlanta, best Saddle Horse	10
H. T. Greenwood, N. C., 2d best " "	Plate

5th. JACKS AND JENNETTS.

Southern Raised.

W. W. Cocksey, Walton co., best and largest Jack, (cup)	\$10
W. W. Cocksey, Atlanta, best Jennet,	10
W. W. Cocksey, Walton co., best Jennette with a colt by her side,	10

Frm. MULES.

Georgia Raised.

J. N. Craven, Atlantia, best 2 years old,	\$5
W. Berry, Elowah, best " "	20

Southern Raised.

J. A. Hoggie, Marietta, best yearling Mule,	\$10
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7th. SHEEP.

First Class—Ewes.

J. W. Watts, Cass co., best pen, consisting of Bucks, Ewe and Lambs,	\$10
J. W. Watts, Cass co., 2d best " "	Plate.

Second Class—South Down.

R. Peters, Atlanta, best pen, consisting of Buck, Ewe and Lambs,	\$10
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Third Class—Long Wools.

J. W. Watts, best pen, Bucks, Ewe and Lambs, (New Oxfordshire),	\$10
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J. W. Watts, 2d best, Bucks, Ewe and Lambs, (Broad Tail)	Plate.
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Fourth Class—Natives and Grades.

J. W. Watts, Cass co., best pen, Bucks, Ewe and Lambs,	\$10
E. Parsons, Atlanta, 2d best pen, " "	Plate.

WOOL.

J. W. Watts, Cass co., best sample of Wool, (Merino and New Oxfordshire.)	\$15
R. Peters, Atlanta, best sample of Wool, (South Down.)	5

CASEMERE GOATS.

R. Peters, Atlanta, best Buck and Ewe, (Thorough Bred.)	\$10
Scott Davis, S. C., best Buck and Ewe, (Grades.)	5

SHEPHERD'S DOG.

R. Peters, Atlanta, best Shepherd's Dog,	\$5
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5th. SWINE.

Second Class—Berkshires.

R. Peters, Atlanta, best Boar,	\$5
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" " Sow,

" " " "	5
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Third Class—Black Essex.

R. Peters, Atlanta, best Boar,	\$5
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" " Sow,

" " " "	5
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PORK, BACON AND BEEF.

G. W. Waring, Habersham, co.—best Bacon Ham, regardless of age—premium silver cup	\$5
I. T. Lenoir, Roane co., Tenn.—best half dozen Bacon Hams, regardless of age—premium (cup)	5
I. T. Lenoir, Roane co., Tenn.—best half dozen Bacon Shoulders,	5
A. M. Ozart, Atlanta—best Bacon Sides,	5

DAIRY.

Mrs. R. M. Young, Cass co.—best jar fresh Butter (cup)	\$5
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Mrs. R. M. Young, Cass co.—best firkin of Butter, 6 months old (cup)	\$5	Georgia Institute for blind; best Shell Work, Special Premiums ordered by Secretary.	\$10
HOUSEHOLD DEPARTMENT.			
Mrs. I. T. Lenoir, Tenn.—best 30 lbs. Leaf Lard (cup)	\$5	Mrs. Orr, Athens; for beautiful Muff from down of Pen-fowl	\$5
Mrs. A. M. Cozart, Atlanta, Ga.—best box hard Soap (cup)	5	Miss Annie S. Leake, Griffin; for various articles made with the toes, (she being with out arms)	10
Mrs. A. M. Nash, Atlanta, Ga.—best 10 lbs. soft Soap (cup)	5	MECHANICAL PREMIUMS.	
Mrs. A. M. Cozart, Atlanta, Ga.—best box of bar Soap (cup)	5	<i>Southern Farming Implements.</i>	
Miss Mary Clark, Walton co.—best box Toilet Soap (cup)	5	Worlick & Williams, Alabama, for seven varieties of Plows,	\$20
Mrs. J. Van Buren, Clarksville, Ga.—best box Tallow Candles,	5	Winship & Co., Madison, best Cotton Gin,	25
Mrs. S. C. Elam, Atlanta, Georgia—best Corn Bread (premium)	5	" " " " " Wheat Fan,	5
Mrs. J. S. Rowland, Cass co.—loaf of Light Bread (premium)	3	Harvy & Garlington, Newton county, best Thresher,	10
Mrs. I. T. Lenoir, Tenn.—best Dried Apples,	3	J. McCook, Baltimore, Corn and Cob Crusher,	5
Mrs. B. P. Bomar, Atlanta—dried-dried Figs,	2	Jno. Simpson, Atlanta, Moveable Horse Power,	10
Mrs. A. Means, Oxford—largest collection of Jellies, Preserves, Pickles, Jams, Catsups, Syrups, Cordials, &c., made and exhibited by one person,	10	MANUFACTURES OF LEATHER.	
Mrs. G. W. Fish, Oglethorpe—16 varieties of Vinegar,	10	Miller & Andrews, Atlanta, best Carriage Harness,	\$10
SOUTHERN DOMESTIC MANUFACTURES.			
Mrs. J. S. Rowland, Cass co; best pair Woolen Blankets (cup)	\$10	Miller & Andrews, Atlanta, best Gentleman's Saddle,	5
Mrs. J. S. Rowland, Cass co; best pair Cotton Blankets (cup)	10	H. Tomlinson, McDonough, best one dozen Brogan Shoes,	5
Mrs. J. S. Rowland, Cass co; best 10 yards Woolen Negro Cloth (cup)	10	H. Tomlinson, McDonough, best half dozen pairs Gentlemen's Shoes,	5
Mrs. J. S. Rowland Cass co; best Carpeting (cup)	5	Marietta Leather Company, best and largest collection of Leather,	20
Mrs. M. A. Seago, Atlanta; best Coverlet—wool or mixed (cup)	5	Marietta Leather Company, best side Sole, Upper and Harness, (each)	2
Mrs. J. S. Rowland, Cass co; best Cotton Comfort (cup)	10	Marietta Leather Company, best half dozen sides Calf Skins,	5
Mrs. K. Kilian, Atlanta, best pair of Woolen Socks (cup)	1	B. F. Swanton, Decatur, best side Oil Dressed Whang Leather,	5
Mrs. J. S. Rowland, Cass co; best 10 yards Woolen Jeans (cup)	5	B. F. Swanton, Decatur, best dozen Dressed Sheep Skins,	5
Mrs. J. S. Rowland, Cass co; best piece Diaper (cup)	5	Marietta Company, best Dressed Goat Skins,	5
Mrs. Wm. Sanford, Baldwin, Coverlet—cotton or mixed (cup)	5	MANUFACTURES IN WOOD AND IRON.	
Miss E. Horton, Griffin; best Cotton Socks	1	M. Kirkpatrick, Atlanta, best Bureau,	\$5
Mrs. J. S. Rowland, Cass co; 10 yards Flannel (cup)	5	A. J. & J. S. Williams, DeKalb, best set of Chairs,	5
Mrs. J. S. Rowland, Cass co; best piece of Plaid (cup)	5	J. Winship, Atlanta, best Window Sash and Blinds,	5
%.			
Miss M. H. Berry, Henry co; best Sewing Silk	\$2	J. Winship, Atlanta, best Panel Door,	5
J. H. Newton, Athens; best Raw Silk	2	J. R. Wallace & Bro., Atlanta, best one dozen Cedar Buckets,	5
<i>Raised Worked Work, Tapestry Work, &c.</i>			
Mrs. A. W. Stone, Atlanta; Piano Covers (cup)	\$10	R. H. May, Atlanta, best Buggy,	10
Miss S. A. Lightower, Barnesville; Table Covers (cup)	5	Atlanta Iron Works, best Casting,	10
Miss Ella Cline, LaGrange; Chair Cover	Plate	" " " " " Grist Mill Irons,	5
Miss L. Hensell, Marietta; Ottoman	"	M. A. Cooper, Etowah, best Nails, Nos. 4 to 10,	10
Miss M. J. Powell, Atlanta; Footstool Cover	"	SOUTHERN MADE MACHINERY.	
Mrs. A. N. Stone, Atlanta; Hearth Rug	"	F. M. Allen, Burke county, best Rope Twisting Machine,	\$10
Miss L. J. Read, Augusta; Lamp Mat	"	F. M. Allen, Burke county, best Improved Gin Gear-	10
<i>Embroidery in Silk, Flax, Chain-Stitch or Braid.</i>			
Mrs. J. Stovall, Augusta; best Shawl	Plate	Gordon & Smithwick, Burke county, Grist Mill,	10
Mrs. Nelson, Atlanta; Mantle	"	T. B. Farris, Atlanta, Shingle Machine (Gudes & Co-	5
Mrs. Stovall, Augusta; Child's Dress	"	man's Patent.)	5
<i>Knitting, Netting, or Crochet in Thread.</i>			
Georgia Institution for the Blind, Macon, Ga.; best Child's Socks	Plate	J. J. Calt, Athens, Patent Churn,	5
J. H. Newton, Athens; best Counterpane	"	MANUFACTURES IN STONE AND MARBLE.	
Georgia Institution for the Blind; best Tidy	"	Sloan & Outman, Atlanta, best Marble Monument,	\$5
<i>French Needle Work.</i>			
Mrs. G. N. Simmons, Griffin; most beautiful Handkerchief	Plate	CHEMICAL MANUFACTURES, &C.	
Mrs. G. W. Goss, Augusta; beautiful Collar and Chemisette	Plate	Smith & Ezzard, Atlanta, best Castor Oil,	\$2
<i>Patch Work in Cotton.</i>			
Mrs. J. S. Rowland; best Patch Work Quilt in Cotton (prem. plate)	\$5	W. C. Young, Opelika, very superior Lime,	10
Mrs. S. Fair, Columbia, S. C.; best Patch Work Quilt, in Silk, (prem. plate)	5	FINE ARTS.	
Mrs. D. Low, Heard co; best Raised Work Quilt, (prem. plate)	5	John Maier, Atlanta; best specimen Animal Painting in oil from nature	\$20
Miss M. J. Powell, Atlanta; best imitation Marseilles Quilt	5	John Maier, Atlanta; best specimen Fruit Painting (oil)	5
Mrs. J. A. Clark, Walton co.; woven Counterpane	5	Miss Mona Brown, LaGrange; best fancy Landscape Painting (oil)	5
<i>Needle, Shell and Fancy Work, Spanish and American.</i>			
Miss H. J. Rose, Macon; best Collar	Plate	Mrs. A. A. Sharpe, Atlanta; best Painting (water colors)	5
Miss Mary Fish, Macon; best Handkerchief	"	<i>Southern Manufactures, other than Domestic.</i>	
Mrs. J. A. Harris, Richmond co; best Child's Dress	"	Laurenceville Manufac. Co; best bale Osnaburgs (cup)	\$5
Mrs. L. Graves, Newton co; best ladies' Cloak	\$10	Athens Manufacturing Co; best bale Kersey's (cup)	10
<i>Wax and Shell Work.</i>			
Miss Maria L. Brown, LaGrange; best work in Fruit Plate		Athens Manufacturing Co; best bale Plains (cup)	10
		Athens Manufacturing Co; best bale of Yarns (cup)	10
		WINES.	
		Mrs. Gather, Oxford, best Wine (cup)	\$8
		Mrs. Davison, Woodville; bland Madeira Wine, (cup)	5
		Mrs. Nelson, Macon; 3d best wine	3
		Mrs. S. Rose, " Scuppernong wine	5
		[Between the 1st and 2d specimens the Committee differed as to which was the better; at the close of the trial it was found that all of the No. 2 was consumed showing the severity of the trial.—Committee.]	
		MISCELLANEOUS AND SPECIAL PREMIUMS.	
		C. W. Dill; test Dauguerreotypes	\$5
		Hanleiter & Co; Blank-Book Binding &c.	5
		Jones, David & Campbell, Atlanta; Dentistry	5
		L. Welles, Atlanta; Ornamental centre piece for parlor ceiling (plaster of Paris)	

Mrs. W. Braumiller, Atlanta; Ornamental Hair Work \$5
Sloan & Oatman, Atlanta; Marble Enslature 5
Mrs. A. W. Stone, Atlanta; Leather Work Picture 5
Frame 5
J. C. Lemmins, Atlanta; Georgia-made Segars 5
Mrs. Bowman, Hall co; fly brush 5
R. Chapman, Augusta; improved horse shoes, six pat- 5
terns 1
W. H. Jones, Atlanta; best sack of meal 1
Pioneer Manufacturing Co; best Printing and Wrip- 5
ping Paper. 5
J. P. Medley, Columbia, Tenn; improved Buggy con- 5
struction 2
W. Humphreys, Savannah; Metallic polish 5
P. H. Green, LaGrange; best sack of Flour 5
J. W. Reed, Oglethorpe co; Rafter-Gage 5
Dr. A. Meaus, Oxford; newly invented tubular Lamp- 2
Stand, Dilatation Stand, Glass Stand for demon- 2
strating planetary revolutions
The above is a correct copy of reports as rendered by
the Committees.

J. CAMAK, Sec. S. C. A. S.

OFFICERS OF THE SOUTHERN CENTRAL AGRICULTURAL SOCIETY
FOR THE LASTING YEAR.

Hon. M. A. Cooper, President.
Col. P. M. Nightingale, 1st Vice President.
D. W. Lewis, Esq., 2d Vice President.

Executive Committee.

Col. J. M. Davidson,	Green co.
W. J. Eno, Esq.,	Augusta.
Richard Peters, Esq.,	Atlanta.
Col. J. S. Thomas,	Baldwin co.
Maj. J. S. Rowland,	Chester co.
Dr. J. S. Linton,	Athens.
J. J. Greenham, Esq.,	Bibb co.
Col. John Banner,	Haworth co.
Dr. L. Mercer,	Lee co.
W. M. D'Antignac, Treasurer.	
J. Camak, Secretary.	

Delegates appointed by the President to the S. C. A. S. Agricultural Fair of

ALABAMA.—1st dist. Mr. McAlister; 2, John A. Jones, Esq.; 3, A. G. Gilling, Esq.; 4, P. H. Green, Esq.; 5, T. G. Barron, Esq.; 6, Asbury Hall, Esq.; 7, D. W. Lewis, Esq.; 8, Dr. John Sims.

TENNESSEE.—C. W. Garrison, Esq., Col. John Horne; Nathan B. F. Esq., Mr. Meigs, (1st Member); J. S. Rowland, Esq., J. I. Cobb, Esq., James M. Jackson, Esq., Dr. Wm. E. Dearing (Shelby); J. M. Dyer, (Shelby); John Bridges, (Shelby).

SOUTH CAROLINA.—Erasmus Cheever, Esq., W. F. Crawford, Esq., Hugh Lattin, Esq., (Horry); J. A. Pope, Esq., (Richmond); Dr. Jas. Camak, (Richmond); J. A. Whitton, Esq., (A. Pope).

NEW YORK AND GEORGIA.

It is the common boast of the people of the North that they are making more rapid progress in population, wealth and internal improvements than the people of the South, and it is generally conceded that they have just and substantial grounds for their boasting. But it is a curious fact that the progress of the State of Georgia, the Empire State of the South, for over 60 years, has been in a greater ratio than of New York, the boasted Empire State of the North. In the year 1790, the population of Georgia was 82,000, and in the year 1850 it was 330,000, an increase of eleven fold in sixty years. In 1790, the population of New York was 340,000, and in 1850 it was 3,027,000, being an increase of only nine fold in sixty years. This fact puts to flight the boasted superior advancement of at least one State, and that the wealthiest and most populous.

The comparison would be still more favorable for Georgia, if the fact were taken into calculation, that but few foreign immigrants find their way to her borders, whilst New York annually receives her thousands and tens of thousands of such accession. In 1850, there were in Georgia, of foreign born citizens, only 5,488 of all colors, whilst in New York the foreign born population aggregated 655,920. Deduct the foreign born from the natives, and the increase of the population of Georgia would still be nearly eleven fold in sixty years, whilst the increase of the native population of New York would not be quite seven fold in sixty years.—*Carolina Times.*

THE BEY ROT IN COTTON.

EDITORS SOUTHERN CULTIVATOR.—Permit me, in behalf of myself and neighbors, to make known the existence of a disease in our cotton to a much greater extent than ever before known by us, called the "dry rot," and ask you some questions as to the probable cause.

The disease we speak of attacks the top bolls. The seed and lint first rot and turn black; then a sore or scale appears, resembling a puncture with a sharp instrument. This extends quite over the surface of the boll, and very frequently—after the disease has taken possession of the whole pod—it opens its prongs and presents a thoroughly rotten state in all its parts. So far as the writer's observation extends it is most injurious to sandy soils, and where it appears most malignant in those fields which have been longest in cultivation. It is seen, however, in places where the lands have been well manured and cultivated. I am not sure the lint or some better lands are suffering to some extent with it.

In this vicinity, it is felt as a serious drawback on our crops from 150 to 200 pounds per acre, all of our crops will suffer from it and thus after the bolls seemed to have matured. Hence, we have conversed on the subject a good deal, and the writer has concluded to call your attention to it, and ask, if the cause is known to yourself or older planters than we are. The specific inquiry or inquiries we would ask of your better judgment, are, what or this rot is probably caused by peculiarity of soil? Or is it the result of the seasons (there have of late been no rains)? Or the kind of cultivation? Is this induced? Is there any reason to credit the conjecture that one variety of cotton is more liable than another to this disease? This year the rot is doing so much harm to our cotton as to render examination and remedy, and if it should increase its ravages from year to year it would be felt as a serious evil.

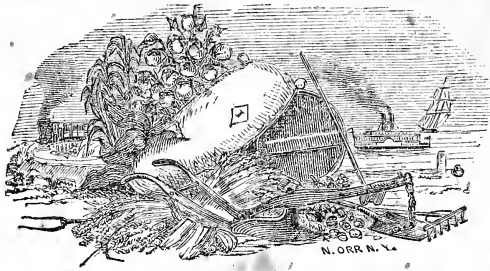
I hope the readers of the *Cultivator*, as well as yourselves, will give attention to the subject—all planters are interested, at least in one point, and this is as to the extent of the injury. Very respectfully, I subscribe myself,

EVERETT BEND.

Atlanta, Oct. 1855.

REMARKS.—The senior editor will reply to these inquiries in our next. Time and space are both lacking, at present.—*Eds.*

HYDROPHOBIA.—It is said that in every instance, where a person is bitten by a mad dog, small pustules make their appearance sooner or later on the underside of the tongue, but generally in from six to nine days. These pustules must be opened with a sharp pointed instrument, as they are too tough to break of themselves; and the matter must be discharged and spit out, or it will be reabsorbed, which reabsorption is said to cause the paroxysms termed hydrophobia. The above is the substance of a communication which appeared in the *New Orleans Tropic* some years since, from the pen of a Southern physician, who says: "In 1832 I was called to visit a negro woman who had been bitten by a mad dog and by pursuing the treatment here laid down I was successful in curing her. This course is the same that was recommended by Professor Marochiti, of Moscow, in 1820, and proved effectual, and my first intimation of this mode was from an English magazine published forty years ago, containing a communication from a gentleman recently returned from Tartary, where mad dogs are common and this method of treatment usual and successful."



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 11.....NOVEMBER, 1855.

ANSWERS TO CORRESPONDENTS.

H. D.—Many thanks for your very kind invitation. We hope yet to have the pleasure of visiting you at your homestead on the old Cahaba River. Shall always be glad to receive and publish your favors.

CATAWBA VINEYARDS.—W. H.—Address Mr. CHARLES AXT, Washington, Wilkes Co., Georgia.

TABLE FOWLS.—G. M. B.—The best pure bred fowl for all practical purposes is the Brahma, and the very best "cross," for table use, is the Brahma and Dorking. At least, this is the result of our somewhat extensive experience.

COTTON GINS AND PRESSES.—P. L. E.—Parkhurst's Gin produces beautiful cotton, but it is too slow and liable to clog. We regard the Bullock Press as far superior to the common, old-fashioned screw.

FRUIT TREES.—A. P. G.—See different advertisements of our Southern Nurseries in present number. See, also, *Work for the Month*, and hints on Transplanting, elsewhere, in present number.

CORN CRUSHERS, &c.—W. D. G.—We do not think much of the machine you allude to, and would advise you to order the "Little Giant." See advertisement. Your other inquiries answered per mail, and papers sent.

MORUS NIGRA, OR CHINESE BLACK MULBERRY.—An esteemed friend and correspondent wishes to know if this has been cultivated with success in the South. Can any of our readers give us information respecting it?

RICE MILLS.—A subscriber at Warm Springs asks:—"Can you inform me what would be the probable cost of a small Rice Mill, of simple construction, and one of the cheapest order, without any of the running gear?" Will some of our seaboard readers answer?

NUT GRASS.—T. H. A.—The grass you complain of is, doubtless, that awful scourge, *nut grass*. We know all about it, here; and a Premium of several thousand dollars could easily be raised as a reward to any one who would furnish a cheap plan for its extermination. Plow your ground several times during the winter, turning up the roots to the action of the frost—sow the infested ground down thickly in small grain (oats, barley or rye,) to be followed, immediately, by a heavily broadcast crop of cow peas, these again to be followed by another crop of small grain, and so on for a few years, with the repeated winter plowing and exposure to frost—or, keep it constantly hoed down, and do not allow it to go to seed—dig a broad deep ditch, all around the ground infested, and do not let it cross the assigned limits. These are the only remedies for *nut grass* that we know, short of digging the

ground two spades deep and carefully sifting out every one of the nuts or roots—a much too slow and expensive process, where it has spread over any large extent of land.

GRASS SEED.—W. E. J.—We handed your order to Mr. HAINES, who advertises Grass Seed in present number. It is yet early enough for your purpose. Will endeavor to procure you the Box edging, when desired.

SOAP MAKING.—"Dora," of Miss.—We will publish your article, and endeavor to give the information you require, in our next.

DISOLVED BONES.—G. W. L.—Use diluted Sulphuric Acid. See *Southern Cultivator* vol. 11, page 142. Bones thus prepared, form an excellent manure.

POSTAGE STAMPS.—W. H. T.—Yours received. All correct.

GRASS SEED.—N. G. S.—Handed your letter to a dealer in Grass Seed, who will reply to it.

LUCERNE.—J. H. W.—The seed you desired was forwarded per mail, Oct. 27.

Other inquiries will be answered in our next, and commissions attended to as soon as we can find time.

CASHMERE GOATS.

R. PETERS, Esq., of Atlanta, in a private letter, thus alludes to the hardness and *frugality* of this valuable stock:

"I am better pleased every day with my Cashmere Goats. They are now living and growing fat on the seed of 'rag weed'—a plant which no other animal will eat."

We are also indebted to Mr. PETERS for several samples of wool from some of his half-blood kids (raised from the common Goat and a Cashmere Buck.) These samples, which may be seen at our office, are really of astonishing fineness and length of fibre; and when we consider the undoubted value of this wool for manufacturing purposes—the hardy character of the Goat—its exemption from nearly all diseases—its dog-defying character—and its superiority in almost every respect over the sheep, so far as vigor and stamina are concerned—we are constrained to repeat, with increased confidence, our declaration of last month, that the Cashmere Goat is by far the most important and valuable addition that has been made to our domestic animals within the past century. In concurrence with this opinion, we are pleased to mention the name of that profound scholar and zealous naturalist, Rev. Dr. BACHMAN, of Charleston, whose allusion to their value will be found near the close of his very able article on Southern Grasses, in present number.

We also learn that Dr. JAS. B. DAVIS, of South Carolina, passed through this city recently, with fifteen three quarter bred Cashmere ewe kids, 7 months old, and one pure bred 2 year old Cashmere Buck: having sold the lot (16) to a gentleman of Gallatin, Tenn., for the handsome sum of *Four Thousand Dollars*—the kids rated at \$200 each, and the Buck at \$1000.

It will be observed that Mr. PETERS offers a few half-blood Cashmere Bucks for sale. See advertising columns.

The editor of the *Ohio Farmer* mentions as having seen at Cincinnati, Duchesse D'Angoulême pears that would weigh over a pound, on trees only two years old from the bud.

THE SEASON—DROUTH.—With the exception of one or two slight showers, we have had an uninterrupted drouth for nearly or quite two months, in this vicinity. There never has been a more propitious season for cotton picking, and the quality of the crop thus far received is very superior. All other agricultural interests, however, are beginning to suffer sadly, and we hope soon to be blessed with good, heavy, soaking rains. Oct. 26th.

NEW ADVERTISEMENTS.—The attention of the reader is directed to the following:


Randall & Mercer's Cotton Seed Drill.
Patent Self-Sharpening Straw and Shuck Cutter.
Downing Hill Nursery, Atlanta, Ga.
Fruitland Nursery, Augusta, Ga.
Premium Strawberry Plants.
Agricultural and Mechanical Implements, &c.
Troup Hill Nursery, Macon, Ga.
Grade Cashmere Goats.
Black Essex Pigs.
Fashionable Clothing—J. M. Newby & Co., Augusta, Ga.
Devon Grade Heifers for sale.
Hovey's Seedling Strawberry Plants.
Bessman's Garden.
Grass Seeds, &c., &c., &c.

FORMAN'S PATENT IRON PLOW.

AFTER giving this Plow a very fair and impartial trial, we can truly say that we regard it as a most valuable improvement on all common wooden implements of the kind now in use. For general efficiency and convenience, as well as special adaptation to *deep tillage or subsoiling*, we know of nothing that surpasses it; while, on the score of *economy and durability*, it is altogether unrivalled. No Plow with which we are familiar is so well calculated to resist the careless and destructive usage of plantation negroes, and we doubt not that its general introduction would be of very great pecuniary benefit to the planting interest of the South. We will endeavor to give an engraving and more particular description of this Plow in our next. I. C. FITTEN & Co., of this city, are the General Agents for this section; and the Plows may also be obtained here at the different hardware stores.

GRADING INSTRUMENT.

EDITORS SOUTHERN CULTIVATOR.—All who use a Level or Grading Instrument should feel gratified to Rev. WM. JOHNSON, for his excellent description of his instrument, which seems (to me at first view) to be the best yet contrived. I think, however, that in laying off his arc he errs in laying it off by *tangents* instead of by *sines*. Certainly, as the foot of the instrument is raised, the *sine* measures the difference of level. As Mr. J. seems to be a scientific man, I for one, would be glad if he would examine his demonstration of the principle of his level, and rectify the error, if there be one. B. P. B.

 Rancid butter, it is said, may be rendered sweet and good by churning it in new milk. Try it.

TO CORRESPONDENTS.—The articles of the following correspondents are on file for insertion in future numbers of our journal:


Frog Level—S.—J. H.—I. W. Briggs—R. Buchanan—H. Speaks—W. W. R.—Dora—J. B. B.—H. L. T.—W. G. B.—A. S.—S. M. B.—R.—L. G. W.—B. B.—H. C.—A Subscriber—J. L. L.—A. D.—Omo—J. P. M.—A. M. R.—A. C. A.—T. R.—Saccharine—T. H.—S. B. M.—Sam—C. W. E.—W. T.—E. P.—A. J. A.—W. H.—Denton Offutt—J. L. G., &c. &c.

Several articles in type are unavoidably postponed until our next.

VETERINARY JOURNAL.—We are pleased to see this able magazine revived. All breeders of horses, cows, sheep, swine and other domestic animals, should subscribe for it. It is published monthly in Boston, Mass., by S. A. THOMPSON, and edited by Prof. GEO. H. DADD. Terms—\$1 per year, in advance.

"A WORD ABOUT FERTILIZERS, AND DIRECTION FOR USING THEM."—This is the title of a small pamphlet sent us by D. C. LOWBER, Esq., of 94 Magazine street, New Orleans. It contains some valuable information, and may be ordered from Mr. L. per mail, by enclosing him a postage stamp.

A LARGE APPLE.—We are indebted to Mrs. R. S. McElroy, of Pickens District, for a present of the largest apple that has, as yet, come under our observation. It is fourteen inches in circumference, and weighs one pound and a quarter, and only a fair sample of her own raising. It is called the Buff apple. Whilst stopping at her residence a few evenings since, we were shown quantities of the above apple, and, taking them all in all, we are sure they were the soundest and finest looking apples we ever saw.—*Greenville (S. C.) Enterprise.*

 **A "Housekeeper"** will find her inquiries answered in the following article:

TO PRESERVE QUINCES.

THE orange quince is the best to preserve. Peel and core the quinces; weigh them; put a pound of sugar to a pound of fruit. Boil the quinces very tender in water. When all are cooked, make a syrup of the water and sugar; then put in as many of the quinces as the syrup will cover, and let them boil about thirty minutes. Take them out to cool on a flat dish and put in more, until all are boiled. Then boil up the syrup again, and strain it hot over the quinces in a jar. If you wish to increase the quantity without additional expense, have as many sweet apples cored, quartered and pared as will weigh one-third as much as the quinces. When the quinces are done, put in the apples and boil them soft. Put quinces in the jar alternately. The flavor of the quinces will penetrate the apples.

QUINCE MARMALADE.—Pick out the poorest of the quinces; pare, core and boil them in as little water as will cover them. When soft, take them out. Weigh them before boiling, and put a pound of sugar to a pound of fruit. Mash up the fruit, and boil the fruit and sugar together; then strain through a coarse sieve, and put it up in small jars.

QUINCE JELLY.—Prepare quinces as above; cut them in small pieces, and boil them in water with the seeds, cores, and parings about one hour. Strain through a sieve; measure a pint of juice to a pound of sugar; boil these together about twenty minutes, and strain into moulds. The quinces strained out will make good marmalade with the addition of sugar.—*American Cook Book.*

ALABAMA STATE FAIR--POSTPONEMENT.

In consequence of sickness in Montgomery, the Fair of the Alabama Society is postponed until the 20th of November, when it is confidently expected that all danger of infection will be over. It will then be held in Montgomery, according to previous arrangement.

It is our intention to witness the Fair inauguration of our sister State, unless unavoidably prevented; and we hope to meet there, and become personally acquainted with many of our now unknown friends and readers.

SETTING OUT ORCHARDS--TRANSPANTING FRUIT AND ORNAMENTAL TREES.

If you wish to enjoy Fruit of the finest kind, from trees of your own planting, begin setting them out now. The establishment of a good and perfect orchard, containing a succession of all the best Fruits adapted to the South—from the earliest to the latest—is so easy, in our most favorable climate, that it seems a wonder to us that any land-owner, who has the comfort and welfare of his family and humanity at heart, should be without one. A contemporary, who is engaged in the praiseworthy work of propagating and disseminating the choicest varieties of Fruit Trees, has truly said:—"The man who plants an orchard, erects his own monument; and such a monument, built by his own hands, reflects greater honor upon his memory than towering marble sculptured by his posterity." It was a maxim of the Romans, that "old men must plant trees, for young men were not wise enough;" but, alas! we fear that neither old men or young are overburdened with tree-planting wisdom, wherever the all-powerful cotton plant holds sway. Let us not be misunderstood—cotton is a glorious plant, and we yield to no one in proper estimation of its value; but that its cultivation throughout the South has been pushed onward to the almost total exclusion of many products which contribute very largely to the comfort and luxury of life, no one will deny.

In our attention to Fruits, particularly, we are far behind our neighbors of the North, though our advantages in climate, length of the growing season, number of varieties, &c., surpass their's, immeasurably. For instance: in the vicinity of Augusta, we have the Apple, Pear, Peach, Plum, Nectarine, Apricot, Quince, Cherry, Grape, Strawberry, Raspberry, Blackberry, Melon, and other hardy fruits, common to more Northern climates, growing side by side with the Fig, the Pomegranate, the Jujube and the Olive—all denizens of the warmer, semi-tropical latitudes; while, a short distance south of us, the Orange, the Lemon, the Lime, the Guava and the Banana flourish equally well. With all our advantages of climate, therefore, and with every variety of soil and exposure—with the markets of the whole world thrown open, and, as it were, "brought to our very doors," by the all-potent aid of steam, on land and sea—is it not surprising that the South has not poured olive "oil and wine," fresh fruit and dried, and many other luxurious dainties, into the laps of less favored Northern nations, long ere this?

That she has not done so heretofore is to us, indeed, a marvel and a wonder; but that our people should con-

tinue indifferent to their own enjoyment and interest in this matter much longer, seems hardly possible, when we reflect upon the success which has everywhere attended all well-directed efforts in Fruit growing, in every section of the South, as evinced for a few years past at our Agricultural and Horticultural exhibitions, and through the columns of our own and other journals of similar character.

It is not improbable that the failures which have often attended the introduction of Northern and European trees into the South, have had a discouraging effect upon many persons who were desirous of cultivating Fruit; but now that we are beginning to establish large Nurseries for the propagation and sale of Southern Seedling Fruits, and the proper acclimation of Northern and foreign varieties, there can be no possible drawback upon the prosecution of this delightful pursuit, except indifference, indolence, and the want of proper information.

This information it has been and will be our aim to communicate to our readers from time to time, and as the season for transplanting trees and shrubbery is now close at hand, a few suggestions as to the best manner of performing that important operation, may not be unacceptable:

TRANSPANTING TREES AND SHRUBBERY.

1. *The Time.*—When the leaves have fallen, and after the first good, soaking fall rains, is the best time for transplanting Fruit and all deciduous ornamental tree, in the South; but any time before February will do.

2. *Preparation of the Ground.*—If not naturally dry, your land must be thoroughly drained. Then plow and cross-plow, stirring up the subsoil and pulverizing the earth as deeply as possible. The subsoil plow, following in the furrow made by a good common double turning-plow, ought to do this work well, if properly used. On fresh, new land, no manure will be needed; but, on poor, old fields, it will be necessary either to turn under a good crop of pea vines, or to give the land a heavy top-dressing of compost formed of stable manure, woods mould, broken bones, ashes, lime, &c., being careful to bury all fertilizing matter well at the final plowing. Then harrow your ground finely, stake it off at the proper distance for the trees, and prepare these for planting.

3. *Preparation of the Tree.*—This consists in cutting off smoothly, with an upward slant, the ends of all broken or bruised roots, and cutting in the limbs or branches to correspond with the loss which the roots have sustained. The tap root should, also, be cut off smoothly, leaving rather a concave space between the lateral or side roots.

4. *Planting.*—Dig your holes at least 4 feet across and 2 feet deep—throw the surface soil on one side and the subsoil on the other, and mix with the latter a small proportion of the compost before mentioned, or some good rich mould. Then throw the surface soil into the bottom of the hole and fill up nearly to the surface with the remainder, raising the earth in the form of a mound upon the centre of which the tree is to be placed at about the same depth it stood while in the Nursery. It must then be held steadily while the finely pulverized earth is sifted

in all around even the smallest roots, all of which must be spread out in their natural position, and the earth compacted by a bucket of water, when the hole may be filled up and the soil pressed down gently with the foot. If this is properly done, the tree will need no staking.

5. *Mulching*.—This is all-important, and consists in spreading all around the tree for the space of 3 or 4 feet, a thick layer (6 inches) of old pine straw, dead leaves or coarse litter of any kind, and sprinkling over it a few shovelful of earth to keep the wind from blowing it away. Trees, thus treated, have, with us, stood the severest drouths without any injury whatever, while those not mulched have perished.

6. *Pruning and Cultivating*.—While the trees are young, namely: for the first 2 or 3 years, they may easily be made to assume the proper *low, spreading form*, by heading back the leading shoots and cutting out interlacing limbs, but after the third year little pruning will be necessary. The ground should also be carefully *cultivated* in sweet potatoes, cow peas, pindars and other low growing hoed crops, for a few years, great caution being exercised in so plowing as not to injure either trunk or roots; but, after the trees come into bearing and begin to spread, an occasional crop of cow peas, for turning under, is alone admissible.

THE WHEAT CROP OF 1855.

EVERY new calculation of the quantity of wheat to be garnered in the United States the present year, seems to be on the ascending scale. No one thinks (says the *Register Democrat*) of reducing the sum given by the census takers. In 1850, the amount of the crop is stated officially to have been within a fraction of 100,000,000 bushels. That was a productive year, and the crop of Ohio was nearly 30,000,000 bushels. Mr. CIST, editor of a commercial paper in Ohio, puts down the total of this year of that State at 40,000,000, and computes the whole yield of the States and Territories at \$85,000,000. Mr. CIST has, for thirty years, been engaged as a statician, and places a good deal of confidence in his own figures. He regards the seven States, Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa and Missouri, as the chief wheat growing States, from whence comes all the surplus sent abroad, the others barely producing enough for their own supply, and his calculation is based upon the probable yield in those sections. This mode of computing the supply is not understood, he thinks, in the Atlantic States, and hence they are liable to err in their judgments.

With all the high estimates of the harvest, however, prices are provokingly slow in "coming down;" the best home-made Flour being now (Oct. 22d) worth \$11 per barrel, in Augusta.

THE HORTICULTURIST, for October, is an excellent number; and, under the new management, sustains, in all respects, its previously high reputation. It should be subscribed for and carefully perused by all lovers of Fruits, Flowers and fine Gardens. It is now published in Philadelphia, Pa., at the low price of \$2 per annum. Address ROBT. P. SMITH, Nos. 17 and 19 Minor st., Philadelphia, Pa.

"THE NEW YORK HORTICULTURAL REVIEW," is the title of a new Monthly Magazine of 72 pages. It is "devoted to the Rural Arts and the advancement of the science of Horticulture in the United States," and the first number opens with a vigor and spirit which augurs well for its usefulness and success. It is edited by C. REAGLES, Esq., assisted by H. P. KNIGHT, JAS. SNOWDEN and D. W. RAY, all practised writers and experienced horticulturists. It may be ordered directly from the editor (C. REAGLES, 208 Broadway, New York City) or through the agents, GEO. A. OATES & BRO., Augusta, Ga. Terms—\$2 per year; single numbers, 20 cents.

"AFFLECK'S SOUTHERN RURAL ALMANAC," for 1856, contains a great variety of useful matter for farmers and planters. It may be ordered from all Booksellers, or directly from the editor, THOMAS AFFLECK, Washington, Miss. Price 12½ cents.

STATE AGRICULTURAL SOCIETY OF SOUTH CAROLINA.

It will be seen from the following letter of our friend, Col. SUMMER, that the State Society of South Carolina will meet in Columbia, on the 13th of November. We hope it will be numerously attended, and that a spirit of unanimity and progressive improvement may prevail:

The annual meeting of the State Agricultural Society will take place in Columbia, on Tuesday, the 13th of November.

All Agricultural, Horticultural and Mechanical Societies are invited to send delegates.

The District Committees are requested to make returns to their respective lists of subscription by that day. Col. Arthur Simkins, of Edgefield, will deliver the Anniversary Address. The Executive Committee will meet on Monday at 9 A. M., for the transaction of business. Punctual attendance of all Members is earnestly solicited.

A. G. SUMMER, Sec. Ex. Com.

SOUTHERN GRASSES.—We trust that all who feel an interest in the establishment of pastures and meadows for the support of our valuable live stock, will carefully read and ponder on the very able article of our venerable and learned friend, Rev. Dr. BACHMAN, of Charleston, which forms one of the opening chapters of present number. We feel very great pleasure in being able to promise our readers an occasional communication on subjects of similar interest, from the same distinguished pen.

WATER-MEADOWS, AND IRRIGATION GENERALLY.

THE West of England is becoming famous for the skill displayed in bringing water from uplands on the hill-side at very high levels, and the economy of the process when compared with the costly apparatus and works used for irrigation in other quarters of the world. The journal of the Bath and West of England Agricultural Society informs us that "so highly have the advantages of water-meadows been valued in some of the southern counties that as much as £30, £40 or £50 per acre has, in many cases, been expended in forming them by casting the whole surface of the ground into high regular ridges, with gutters along their crests, and along the valleys between them—the former to bring the water on, and the latter to carry it off

when it has overflowed the slopes of the ridges. In our own districts it has long been the practice to water our land in a manner quite as efficacious as that to which we have alluded, but at an outlay of a little more than one-tenth of that of our neighbors. This we have done by means of our catch-meadows, which have commonly been laid out at an expense not exceeding four or five pounds per acre."

The system of irrigation practiced by the members of this enterprising Society, and fostered by its premiums, appears to us entirely practicable in the Southern, as well as in the Northern States. The principle adopted in making catch-meadows is applicable to the improvement of land for all tilled crops, and it is, therefore, worthy of our best consideration. Rain, as it drops from the clouds, is a well known fertilizer; and after water has passed some distance over the surface of the earth, or through its outer strata, it holds in solution both the mineral and organic elements of all cultivated plants. Educated farmers, knowing this fact, lead it along the natural inclination of the ground in ditches, in such a manner as to keep it at the highest possible elevation along the field which is to be watered; and cutting gutters one below another to catch the water as it flows down over the land, and distribute it regularly over each successive portion. In some cases, the process is to cut a number of side branches to take water from the leading ditches in various directions, and to direct streams into these lateral cuts by means of "stops," according to the part of the field which it is desired to irrigate. If the supply of water is insufficient to cover the whole surface of the land, one portion is watered at a time, which is more expensive than watering the whole by a single operation. Experience has proved that the heavy rains in autumn furnish the most fertilizing water, owing, probably, to the greater disintegration of decaying plants, animals, mould and minerals, in summer and autumn, than in winter and spring.

After the water is brought to the field for distribution, a carriage-gutter 1 foot wide and 6 inches deep, having a descent of 1 foot in 396 along the highest attainable ground, is to be filled with water. As it approaches its termination, the gutter is made narrower than a foot, so as not to convey more water to the most distant part of the field than is distributed to that part where the water first enters. The volume, or dimensions of this leading gutter, are much smaller than those formerly used. The sides and bottoms of larger gutters absorb too much, so that a small stream cannot be broadly diffused over the surface.

Parallel with the main gutter, and on either side of it, where the land descends on both sides of it, smaller gutters are cut, perfectly level from end to end, to catch the water as it trickles over the ground from the central one, and source of supply. All the side gutters being on a water level, they will all overflow at once, when filled, and thus distribute the fertilizing water very equally over the whole field. Long experience and study have lessened the cost and labor of cutting these gutters, which is done by horse-power, and with implements, which we will briefly describe. The sides of all gutters are cut by

two knives that stand like coulters in plow beams, and are adjusted to cut six inches (more or less) in depth, and one foot or less in width.

A plow made to fit the desired width of the gutter cuts the sod, or earth at the bottom, and lifts the mass that leaves a space for the gutter when removed. The sod, or loose earth removed, should not form a bank by the side of the channel in which the water is to be caught, and to flow, but be equally spread over the ground, or hauled off. Gutter-plows are easily constructed, to cut the sides of the small ditch and throw out the earth as the implement advances. In laying out the work, a spirit level is not used, but a simple wooden compass standing five feet high, with the limbs four feet apart on the ground, having a cross-bar, and a plumb line suspended from the top. The cross-piece has a notch in the centre, and the gutterer has only to put one foot of the compass on the earth and turn the other round and note the place of the line on the cross-bar to find the water level, or the nearest approximation to it. The instrument so elaborately described by Rev. Mr. JOHNSON, in our last, appears worthy of trial. To mark out water-courses and excavate them with a plow, at proper distances from each other, is an operation within the skill of every farmer. Experience from year to year demonstrates the great profit of using running water as a vehicle for conveying fertility to soils that lack the same. Springs and mountain streams are rich in all the elements of crops, which should not be permitted to run to waste, but conducted into fields for the production of agricultural staples. At present, running water is impoverishing millions of acres by washing the surface soil into branches, creeks, rivers and the ocean, aided by shallow tillage, often up and down steep side hills. Instead of removing the cream of arated land off one's plantation, water should be made to add largely to the natural resources of the farm. Its evaporation on the surface, after it has risen either by capillary attraction, or in springs from a considerable depth in the earth, rarely fails to enrich the soils by the salts, and humic substances left as a residuum. In a district where no lime rock lies within 500 feet of the surface, we have seen so much of this mineral brought up dissolved in water, as to form large beds of *tufa* by the escape of free carbonic acid. This acid holds common carbonate of lime in solution in water. *L.

Horticultural Department.

WORK FOR THE MONTH—(NOVEMBER.)

[NOVEMBER is so named from the Latin *novem, nine*; it being the ninth month of the Roman Calendar. It corresponds to the Jewish *Chisleu*, (Neh. i. 1.) which signifies *chilled*; the *third* month of their *civil*, and *ninth* of their *sacred* year. The Saxons called it *Wint-monath*, or *Wind-monath*, and also *Blot-monath*, *Blood*, or *Sacrifice-monath*, as they then offered sacrifices of animals.]

THE PLANTATION.

Cotton Picking should be entirely finished by the middle or latter part of this month, in order that the planter and his force may have a little "breathing space" before the beginning of the next year's labors. It may also be advisable to heed well the suggestions in our last number, respecting the ginning, packing and general preparation of the crop for market; for the price it brings will be found to depend as much upon this as upon the length or fineness of staple.

Sweet Potatoes should be dug and carefully banked or

housed immediately, as directed in our last. If you are not quite ready to dig, it is better to cut the vines close down to the ground as soon as the frost kills them: as the roots are often injured by allowing the frozen tops to remain attached to them.

Small Grain, such as *Rye*, *Barley*, *Egyptian* and *Black Winter Oats*, must be sown as soon as possible, now, if you desire early spring pasturage and "soiling" forage. *Hardy Winter Grasses*, such as *Clower*, *Lucerne*, *Till Oat*, *Guinea*, (or "Means") *Rye*, &c., &c., must also be put in the ground at once. Plow deep, pulverize finely and manure heavily for all these crops, or your labor is thrown away.

Hedges of the *Osage*, *Orange*, *Honey Locust*, *Cypress* and *Macartney Rose*, *Evergreen Thorn*, (*Crotalaria Puncata*) &c., &c., should now be set out, in the most thorough and careful manner. (See article of Mr. Park on this subject, elsewhere.)

Fruit Trees, of all the choicest varieties, of *Stout* growth, should be planted now, as soon as the ground is well moistened by the early fall rains. If you delay until spring, you will be too much hurried with other work to give this important matter the proper attention, and it may not be done at all. Remember! that all trees (except some of the *evergreens* of the fir tribes), succeed best in the South when planted in fall or early winter—that by planting now, you gain a year in the bearing of your fruit trees, and that, if you will take the proper pains at first, there is little to do afterwards—"put in one tree more, it will grow while you're sleeping!" (See remarks of *Thurston* on *Fruit Trees* on another page.)

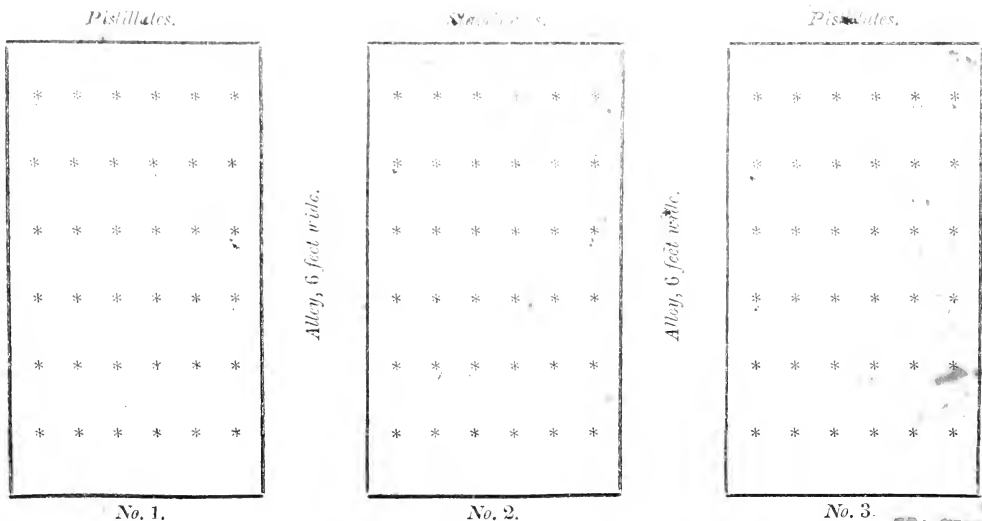
THE GARDEN AND NURSERY.

Sow *Cabbages*, *Turnips*, *Parasnis*, *Lettuce*, *Cucumbers*, *Radishes*, &c., &c. Haul plenty of manure on your garden, have it well spaded, burying under all enriching mat-

ter or vegetable matter. Transplant *Broccoli*, *Cabbages*, *Celery*, "Collards," &c. Dress and manure your *Asparagus* beds, not forgetting to give them a liberal top-dressing of salt, before spring. Save all old bones, soap-suds, dead leaves, decaying vegetables, &c., &c., and make up into compost heaps for future use. Plow and subsoil your ground for the planting of young Orchards and Nurseries, and provide a supply of roots and stocks for the propagation of all new and desirable varieties of Fruit adapted to our Southern climate.

THE STRAWBERRY PATCH.

The best soil for this delicious fruit is a sandy or even a gravelly loam, moist, and rich in vegetable manure. An excellent compost for an acre of ground would be 60 bushels of leaf-mould from the woods, 20 bushels of leached ashes, 5 bushels lime, and 3 or 4 quarts of salt. (This same proportion may be of service for any given quantity of land.) Mix thoroughly, let it stand 2 or 3 days, scatter broadcast and plow in. Then harrow or rake the surface, making it fine and set your plants in rows 3 feet apart, and 1 foot or 15 inches in the row. After the plants become well rooted, cover the whole ground with partly decomposed leaves from the forest, or even chopped up pine or broom straw, leaving nothing exposed but the leaves and fruit stalks of the plants. Our choice of varieties was indicated in our August number, but we will briefly recapitulate: *Pistillates*, (or female blossom): *Hugh's Seedling*, *McArd's*, *Eden's*, *Queen's Seedling*, *Black Prince*, *McArd's*, *Savoy*, *Crown*, &c. STAMINATES, or HERMAPHRODITES, (or perfect blossom): *Longworth's Prolific*, *Black Prince*, *Hugh's Seedling*, *Eden's*, &c. Six or eight rows of Pistillates to one row of Staminate is about the proper proportion; or better still, to avoid all danger of mixing, arrange your beds thus:



It will be seen that Nos. 1 and 3, containing Pistillate plants, are fertilized or fructified by the Staminate plants in the centre bed, No. 2, from which they are separated by alleys 6 feet wide—these alleys to be kept scrupulously free from all runways, especially those thrown off by the Staminate plants in the centre. The beds may be made of any required size. The stars (*) represent the plants in 2 foot rows, 12 or 15 inches apart in the row.

THE OSAGE ORANGE FOR HEDGING—MODE OF CULTURE, TRIMMING, ETC., ETC.

We were just preparing an article on this subject (in accordance with our promise of last month,) when we were favored with the following excellent letter from our friend, H. W. PITKIN, Esq., who is well known as one of the pioneers and most earnest advocates of Hedging, in this country. We cheerfully give place to it, and commend its suggestions to all who would substitute *beautiful, permanent and protective* hedges for the perishable and unsightly zig-zag rail fences in common use. After some general remarks, Mr. P. says:

"The enterprise [hedging] has never looked more encouraging than it does this year. I have never seen the hedges in the West look so beautifully and thriving before. Last season was a hard one, and tested their capability of enduring drouth. And it was remarked by all, that when everything was dried up, the hedges did not seem to suffer. In the last 4 months, I have probably viewed some 300 miles of hedge in various stages of growth and perfection. I have never yet seen a person in any latitude who has properly set *good plants on good soil*, cultivated and trimmed properly, who is not only pleased, but perfectly charmed with the result. There is nothing on a farm which the proprietor takes more pleasure in showing than his hedge. With the right treatment, a hedge can always be turned out in August of the 4th season, or three and a half years from the setting. Many persons have tried to raise the bug bear, that hedges required such peculiar care and attention that common farmers would never succeed in growing them. Why, sir, some of the finest hedges I have seen this year were made by plain men, who had little but common-sense to guide them, and certainly availing themselves of others' experience, with directions, plain and simple, for their guidance. Other men of good common sense can do the same thing. The great secret to complete success in hedge-making lies in doing the work well and at the proper time.

1st. Prepare your ground for the hedge row, by plowing a strip 10 feet wide (or 8 feet will do) and plow it *deep*—no matter how deep—and subsoil below that if possible. Not one man in five who sets a hedge, prepares his ground thoroughly. If the soil is poor, make it rich.

2d. Set your plants *closely*—not more than six inches apart. There is little danger of crowding them. It is vastly easier to fill up spaces with trunks than branches. All the most experienced hedge-growers now advocate close setting. Some of them even contend for 4 inches as the proper distance. [Eight or ten inches is close enough, on good land, in the South.—Eos.]

3d. See that every plant grows, or if any fail to grow, be sure to set another right in. For this purpose, there should always be some plants in reserve. Nothing is more unsightly than a hedge full of gaps. It is an easy matter to fill them at the proper time; but extremely difficult when neglected for a year two. Whatever else you fail to do in making your hedge, do *not* fail the second spring to go over it and fill up every vacant space with a good strong plant. Neglect here, is *fatal* to our complete success.

4th. Cultivate on both sides of the row, *i. e.*, plow and hoe it as well as you would a row of corn.

5th. Trim so as to give your hedge the *triangular* shape. When finished, the base to be three and a half feet wide, and the sides six feet high. By giving it this shape all the branches, from the bottom to the top, have an equal chance at the air, the light and the rain; and the bottom will not *thin* out for the want of them, as it is likely to do when given the perpendicular shape. The first season do

not cut at all; we want to get a strong root formed, and this we can do only by letting the top grow for a season. The second spring, or one year from the setting, cut all down as close to the ground as you can mow them. In May, cut three inches above. Third spring, or two years from setting, cut six inches above the May cutting, or nine inches from the ground. In May, cut nine inches above that.

Fourth spring, cut twelve inches above the May cutting, or thirty inches from the ground, and in May fifteen inches above this. By August, this season, your hedge will turn stock. A short scythe will be found as good an implement to trim with as any. Let it rest upon the right hand, and as you walk along cut half way to the centre of the row. Come back on the other side, and cut the other half in the same way. The ground branches should be cut very sparingly, as the object is to have them spread out on the ground and become strong and thorny.

The labor of trimming hedges we find much less than was at first anticipated. An active man will clip a mile in a day, and as two cuttings is all that is required in a year, it will be perceived that the expense is less than the keeping up of any other fence.

I did not think of writing an article for your paper when I commenced; but what I have written is at your service.

Truly yours, H. W. PITKIN.

INSECT PESTS IN THE GARDEN AND ORCHARD—REPLY TO "QUARO."

EDITORS SOUTHERN CULTIVATOR—Your correspondent, "QUARO," on page 321 of the *Cultivator*, presents a deplorable account of want of success in his horticultural efforts. I, too, have experienced, to some extent, the difficulties of which he complains, and been almost wholly disappointed in my turnip crop, this fall, occasioned by the ravages of an insect. It had been my intention to trouble you with an article—perhaps two or three—upon the habits of certain insects which infect our gardens, and offer suggestion from my own experience, in the way of remedy. My absence from home, and not having my notes at hand, will prevent my doing so, at least until spring.

I will, however, say a few words to "QUARO," on some of the remedies which I have met with in the columns of the *Cultivator*, and elsewhere, and reduced to practice with somewhat variable success, and submit, also, a few suggestions original with myself.

I cultivate Cabbage, liberally in my gardens and devote more attention to them than, perhaps, any other vegetable. Persons whose means of observation are more extended than my own assure me that they meet with no better samples of that vegetable anywhere, Buncombe included. I have weighed *summer* cabbage this season ten and half pounds, clean heads. My winter variety reach often fifteen to seventeen and a half pounds. Notwithstanding the bugs, I know no reason why "QUARO" should not grow the same at Selma, Ala., with similar treatment and *good seed*. It may be proper for me to remark, that I plant seed of my own growth, which have been cultivated by my gardener for nineteen or twenty years, and greatly prefer them to all others.

Of my mode of culture, it will be unnecessary to speak here. Should your correspondent desire it, I will furnish it to him, cheerfully, at another time.

In a systematic war of extermination on the insect tribes, I would recommend him to begin with confidence and a full determination to give them no quarter. Let him buy several dozen common black porter bottles (I get them at 20 cents a dozen); tie a string or wire in a loop around the neck of each, and hang them along the garden fence

and one on each fruit tree; make a mixture of cobalt dissolved in water, one pint; molasses, a half pint, and pour a wineglassful in each bottle. Empty out the bugs, flies, &c., once or twice a week, as they accumulate, and replenish the bottles. This will accomplish part of the battle. You may now drive down a good stake in the centre of your garden, say three feet high; on the top of this nail a platform of planks, say thirty inches square; cover this an inch or two deep with sand. Now instruct your gardener to build a lightwood fire on this every night during the season in which you see the moths, millers or butterflies infesting your grounds. If you will observe you will find them fly into this fire in large numbers, and be consumed.

You should, also, during the cold freezing weather of winter, have your garden soil frequently turned over and exposed to frost—the more frequently this is done, the better. This will be about all you can do in a general way. You must now come to particulars. For cabbages, nothing will wholly supercede the necessity for the operation of worming them.

This should be done *daily*, and is by no means so great an undertaking as one might at first suppose. The elderly lady who weeded her cranberries but once a year, found it a terrible spot of work. Those whose heads are treated to that luxury daily, find no such difficulty. Well, you break off an under leaf from each cabbage and place it on top of the head. In the morning, bright and early, visit your garden, and if there is any worms about your plants you will find most, if not all, on this detached leaf. Provide yourself with a pan of good soap-suds and a brush or large feather; lift off these leaves and brush the worms into your pan. Should you see any others on the plant, treat them in like manner. This plan is infallible, and I have found no other answer as well.

For vines and young plants, I have tried soot, sulphur, lime, plaster, &c., sometimes with success, but often without. I am of opinion the best thing that can be dusted over young plants is a common article of Scotch snuff. This may be put in a tin cup or mustard box and a small piece of gauze of any kind tied over the top. Thus armed, dust the snuff lightly over your plants.

Get a few pounds of guano; prepare the guano-water as suggested frequently in back numbers of the *Cultivator*; water your plants with this, say, once a week. The small quantity of ammonia which this contains is obnoxious to insects, but the dose is so infinitesimal as to be scarcely worth taking into the account of remedies. You will experience a full compensation, however, in the increased vigor of your plants.

My camphor remedy, which I have not yet fully tested, but which I consider a valuable one, is this:—Put into a barrel a quarter of a pound of camphor, in pieces, say, of the size of a hickory nut; fill up with water; let it stand until next day; draw off as much as you may need to water your plants, and fill up the barrel again for next watering. The camphor will be slowly absorbed by the water and will probably last the whole season through. If you should find your camphor water too weak for your purpose you may add to your barrel of water a cupful or more of strong ley. This will increase the solubility of the camphor and make the water stronger, and, of course, more offensive to insects.

I have another remedy of equal value. Procure from your Druggist one or two pounds of cheapest Cape Aloes; to one pound add one gallon of water and one pound of saleratus or pearlash, or what is equally as good, dissolve the pound of aloes in a gallon of ley. Of this solution add to a barrel of water, say, one pint; mix thoroughly and use as the camphor water. The solution of aloes in ley will be the proper wash for your fruit trees. The aloes should not cost you over 50 cents a pound; camphor, ordinarily,

about 50 cents; it will now cost you probably 70 or 75 cents. These are the usual prices with us.

So much for experience. Now a little theory. If you would get your Druggist to procure for you 50 pounds of the cheapest arsenic; dust it over your manure pile and incorporate thoroughly, and thus let it find its way into your garden soil, you will soon be rid, in a great degree, of these pests. It should be laid down to you at 10 cents a pound, or at most 15 cents. Don't be afraid of poisoning yourself or family after it gets into the manure pile. Vegetation does not take up arsenic from the soil, and if you should chance to have a dirt-eater among your gang, he would hardly poison himself after the first year's cultivation of the soil.

Were I situated as you are, I should, by all means, adopt the three *general remedies* indicated above as the main feature, and one or more of the special remedies as your time and inclination may dictate. Those of a general character will, in a few years of persevering effort, rid yourself and your near neighbors of the necessity for the special ones. R. B.

Philadelph., Phil. Oct. 1855.
(*Warren, & Co., Ga.*)

REMARKS.—This is a capital article! Plain, direct, pointed and practical. No opening for a single stricture from our infectious and caustic friend, "GREEN HORN." We trust "R. B." will favor us with many more "of the same sort."—EWS.

THE WARREN AND HERBEMONT'S MADEIRA GRAPE VINES.

EDITORS SOUTHERN CULTIVATOR.—The Warren Grape is now attracting considerable attention from amateurs and nurserymen, both as a table and wine grape. Its hardness, great prolificness and eminent qualities for the table, render it a deserving favorite with those who are so fortunate as to be acquainted with its qualities. I have lately received letters from the most distinguished wine-makers and grape-culturists of Ohio, who seem to be in doubt as to its true identity. Some suppose it to be the same as the Herbenont's Madeira, while others contend that it is different. Mr. Downie says that it was brought into notice by Mr. PRINCE, of Flushing, Long Island. I have always understood that it was taken from the woods in Georgia. "Who shall decide when doctors disagree?" Mr. Downie, also, supposes that it may prove identical with the Lenoir and Missouri Grape. Of the latter I know nothing; (*only from the books*) but if the Lenoir, with which I am acquainted, be genuine, (and I believe it is) there is a striking difference in many respects.

Now, the object of this communication is to get at the true origin and history of those two grapes, viz: the *Warren* or *Warrenton*, and the *Herbenont's Madeira*, and let it be no longer a mooted question.

For the sake of Horticulture and Pomology, I earnestly hope that you, Messrs. Editors, and all others who know anything of these grapes, that will shed light upon their origin and history, will speak out through the *Cultivator*.

How are we to do more for Fruit-Culture than by a proper and correct classification of Southern Fruits, and correcting their heretofore very imperfect nomenclature?

Yours, W. H. THURMOND.

Atlanta, Ga., Oct., 1855.

From the New York Shipping and Commercial List.

COTTON CROP OF THE UNITED STATES.

NEW ORLEANS.		BALES.	TOTAL.	1854.
Export—To Foreign Ports.....	1,67,947			
Coastwise.....	202,317			
Stock, 1st September, 1855.....	39,425			
		1,309,689		
Deduct—Stock, 1st September, 1854.....	24,121			
Received from Alabama.....	32,087			
Received from Florida.....	4,147			
Received from Texas.....	16,690			
		77,045		
			1,232,644	1,346,925
MOBILE.				
Export—To Foreign Ports.....	340,314			
Coastwise.....	11,792			
Consumed in Mobile.....	1,688			
Burnt at Mobile.....	603			
Stock, 1st September, 1855.....	23,519			
		433,908		
Deduct—Received from New Orleans and Texas.....	35			
Stock, 1st September, 1854.....	23,278			
		29,313		
			450,595	593,694
TEXAS.				
Export—To Foreign Ports.....	16,160			
Coastwise.....	64,720			
Stock, 1st September, 1855.....	2,062			
		82,942		
Deduct—Stock, 1st September, 1854.....		2 205		
			80,737	110,325
FLORIDA.				
Export—To Foreign Ports.....	35,018			
Coastwise.....	101,996			
Stock in Apalachicola, 1st September, 1855.....	166			
		137,180		
Deduct—Stock in Apalachicola, 1st September, 1854.....		583		
			136,597	155,444
GEORGIA.				
Exports—To Foreign Ports—Uplands.....	176,194			
Sea Islands.....	6,998			
Coastwise—Uplands.....	195,714			
Sea Islands.....	7,474			
Stock in Savannah, 1st September, 1855.....	2,130			
Stock in Augusta, 1st September, 1855.....	1,707			
		390,212		
Deduct—Stock in Savannah and Augusta, 1st September, 1854.....		11 518		
			378,694	316,005
SOUTH CAROLINA.				
Exports from Charleston—To Foreign Ports—Uplands.....	296,798			
Sea Islands.....	13,680			
Coastwise—Uplands.....	193,456			
Sea Islands.....	5,771			
Burnt at Charleston.....	371			
Stock in Charleston, 1st Sept. 1855.....	2,035			
		522,158		
Export from Georgetown—To Northern Ports.....	4 500			
		526,658		
Deduct—Stock in Charleston, 1st September, 1854.....	17,081			
Received from Florida.....	2,887			
Received from Savannah.....	7,465			
		27,386		
			499,272	416,754
NORTH CAROLINA.				
Export—To Foreign Ports.....	59			
Coastwise.....	26 080			
			26,139	11,524
VIRGINIA.				
Export—To Foreign Ports.....	1,459			
Coastwise, and manufactured (taken from the ports).....	29,741			
Stock, 1st September, 1855.....	55			
		31,759		
Deduct—Stock, 1st September, 1851.....		75		
			31,000	21,936
Received at New York by New York & Erie Canal.....			377	1,132
“ “ “ “ Railroad.....			634	2,253
“ Baltimore and Philadelphia, from Tennessee, &c.....			6,600	8,990
Total Crop of the United States.....			2,847,389	2,930,027
Decrease from last year, bales.....				82,688
Decrease from year before.....				415,543

Comparative Statement of Growth.

Crop of	Bales.	Crop of	Bales.	Crop of	Bales.	Crop of	Bales.	Crop of	Bales.
1854—5.....	2,847,389	1849—9.....	2,728,596	1842—3.....	2,378,875	1836—7.....	1,422,930	1830—1.....	1,038,848
1853—4.....	2,930,027	1847—8.....	2,347,634	1841—2.....	1,688,574	1835—6.....	1,260,725	1829—30.....	976,845
1852—3.....	3,262,382	1846—7.....	1,773,651	1840—1.....	1,634,945	1834—5.....	1,254,323	1828—9.....	857,744
1851—2.....	3,015,029	1845—6.....	2,100,537	1839—40.....	2,177,835	1833—4.....	1,205,894	1827—8.....	720,593
1850—1.....	2,355,257	1844—5.....	2,594,503	1838—9.....	1,360,532	1832—3.....	1,070,488	1826—7.....	957,231
1849—50.....	2,096,706	1843—4.....	2,060,499	1837—8.....	1,891,497	1831—2.....	987,477	1825—6.....	720,027
		1821—5.....	569,249			1823—4.....	509,158		

FROM

FROM	TO GREAT BRITAIN.	TO FRANCE.	TO N. EUROPE.	OTHER F. PORTS.	TOTAL.
New Orleans.....	717,328	178,828	62,682	109,164	1,067,947
Mobile.....	215,248	111,690	8,257	5,716	340,811
Texas.....	8,926	1,570	5,664	.....	16,160
Florida.....	28,068	5,320	1,680	.....	35,018
Savannah.....	171,898	8,106	3,088	.....	183,177
Charleston.....	204,102	70,658	13,700	27,020	315,478
North Carolina.....	59	.....	.....	.....	59
Virginia.....	.....	.....	1,459	.....	1,459
Baltimore.....	1,491	.....	91	.....	1,582
Philadelphia.....	300	.....	.....	.....	300
New York.....	200,967	84,366	87,124	7,378	279,885
Boston.....	1,224	.....	1,555	84	2,878
Grand Total.....	1,549,716	409,981	135,209	149,362	2,244,269
Total last year.....	1,608,750	374,058	165,172	176,168	2,319,148
Decrease.....	54,034	.....	29,972	26,806	74,939
Increase.....	.....	85,873	.....	.....	.....

Total Crop of the United States as before stated.....		..BALES.	2,847,389
Add—Stocks on hand 1st September, 1854—In Southern Ports.....	85,436		
In Northern Ports.....	50,117		135,608
Makes a supply of.....			2,982,942
Deduct therefrom—The exports to Foreign Ports.....	2,244,209		
Less Foreign included.....	891		
		2,245,100	
Stocks on hand 1st September, 1855—In Southern Ports.....	76,644		
In Northern Ports.....	66,692		
		143,336	
Burnt at New York, Boston and Philadelphia.....	2,704		
		2,886,472	
Taken for home use.....			598,564

Bales.		Bales.		Bales.		Bales.		Bales.	
1854-5.	598,584	1848-9.	518,089	1842-3.	325,129	1836-7.	222,540	1830-1.	182,142
1858-4.	610,571	1847-8.	581,772	1841-2.	267,850	1855-6.	236,738	1829-30.	126,512
1852-8.	871,009	1846-7.	427,967	1840-1.	297,238	1845-5.	216,888	1828-9.	118,855
1851-2.	608,029	1845-6.	422,597	1839-40.	295,193	1838-4.	196,413	1827-8.	120,593
1850-1.	404,108	1844-5.	389,006	1838-9.	276,018	1832-3.	194,412	1826-7.	108,458
1849-50.	487,746	1843-4.	346,744	1837-8.	246,663	1831-2.	178,800		

We give below our usual Table of the amount of Cotton consumed the past year in the States South and West of Virginia, and not included in the receipts at the ports. We have decreased the estimate as a whole, from the year previous, but give it only for what it purports to be, an *estimate*, which we believe approximates correctness. Thus:


	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.
North Carolina.....bales.....	15,500	20,000	20,000	18,000	15,000	20,000	20,000	18,500
South Carolina.....	8,000	15,000	15,000	10,000	10,000	10,000	12,000	10,500
Georgia.....	6,000	20,500	27,000	18,000	22,000	20,000	23,000	20,500
Alabama.....	5,000	7,000	6,000	4,000	5,000	5,000	6,000	5,500
Tennessee.....	12,000	12,000	12,000	8,000	7,000	5,000	6,000	4,000
On the Ohio, &c.....	80,500	85,400	27,500	12,000	16,000	30,000	38,000	26,000
Total to September 1.....bales.....	75,000	110,000	107,500	60,000	75,000	90,000	105,000	85,000

To which, if we add (for the past year) the stocks in the interior towns, (5000 bales,) the quantity detained in the interior, and that lost on its way to market, (unusually large the past year—about 25,000 bales,) to the crop as given above, received at the shipping ports, the aggregate will show, as near as may be, the amount raised in the United States the past season—say, in round numbers, 3,178,000 bales, (after deducting the 34,000 bales new crop received this year to 1st inst.) against 3,000,000 for the year 1853-4; 3,363,000 for the year 1852-3; 3,100,000 for the year 1851-2, and 2,450,000 for the year before.

In reference to the consumption of cotton in the country, the past year, both North and South, it will be seen that it has fallen off, although the production has been pretty nearly the same; this may be accounted for, primarily, by the partial failure of the crops of cereals in 1854, the consequent high prices of breadstuffs and provisions, and the general pressure for money felt by all classes in all sections of the country.

The quantity of new cotton received at the shipping ports to the 1st September amounted to 84,079 bales, against 1,890 last year; 716 in 1852-3, and 5125 the year before. Thus it will be seen that the quantity of new cotton received at the ports to 1st September, this year, is largely in excess of last year; but it is an admitted fact, that at that date there remained of last year's crop, (detained in the interior by low river, caused by an unprecedented drouth,) a very large quantity, say 250,000 bales; some estimates are a little lower, but others even higher; and had the cotton thus detained been brought to market and added to last year's crop, it would have approximated the great crop of 1852-3; as it is, it will doubtless soon come forward, and materially swell the aggregate for 1855-6—should not a similar state of things exist next season.

It may be well to observe, that the preceding statement of the crop is that of the United States, as a whole, and does not purport to give the crops of the States, though the shipments, stocks, &c., are necessarily arranged under the different leading shipping ports or States, as the case may be. It is well known, that by the extension of railroads, and other means of transit, oftentimes, large quantities of cotton, grown in one State are received at, and shipped from, the sea ports of another, and this, to a greater or less extent, is the case with every cotton growing State in the Union.

 In order to keep pace with the very decidedly progressive spirit of the age, we give the following articles (from some of our Northern exchanges,) on the last new "hobby" of the day:

FEMALE EQUESTRIANISM.

THE epidemic of female equestrianism is upon us. A Fair without female competition in the ring, is no Fair. Encouragement in female riding and driving is very well, but the danger to be apprehended grows out of that nationality of ours which tends to running every new thing "into the ground." Too often the riding and driving ring at our fairs only needs the addition of tan bark and a clown to make it an amateur circus. As one advances step in the physical education of American women, we are glad to see attention directed generally to the healthful and graceful exercise of boys and girls, young men and young women, on horseback; and competition in the ring, although confined to but few directly, will necessarily create a sort of excitement upon the subject which already has produced beneficial results. Now, it needs only to guard against too "fast" riding.

We have been not a little amused at the report of the "Riding Committee" at the Onondaga (N. Y.) County Fair, as reported in the *Syracuse Journal*. It seems that the committee, instead of deciding upon the horsemanship of others, mounted their own "hobbies," and away they went each one in chase of his own fancy, as to style and dress of the equestrians. The report says:

"With some, the Amazonian style found favor; others thought a less bold and dashing style best comported with the delicacy of the sex; while yet a third class admired an equal blending of the two. Your honorable President wished it to be distinctly understood that no dangerous, break-neck, dare-devil kind of riding was to be encouraged. Some preferred long flowing robes and a hat and veil, giving as a reason for their preference that long skirts were graceful and the hat best kept the hair in order, the veil adding sufficient grace to make it womanly; others were firm in their regard for short skirts, full Turkish trousers and boots, insisting that such a dress made up in safety what it lacked in grace; some liked straw hats; some flat caps; indeed there was as great diversity of opinion expressed as there usually is when any committee went to make a platform."

Whether any were in favor of ladies adopting the Panama Isthmus style, or the circus style, the report does not say. The committee, however, examined history, and came to the profound conclusion that riding is of "very ancient date, though very little (if any) known before the flood," and that the first authentic account of riding to some purpose was that of Rebecca.

The committee, having got confused and embarrassed in the mazes of history and scripture, awarded eleven premiums, promising other premiums next year to the unsuccessful competitors. The first premium was for "skillfully managing different horses," the second for the "extreme beauty with which she sat and rode;" third, for "ladylike dignity of riding;" fourth, "for spirited, fearless riding;" fifth, "for graceful stylish carriage;" sixth, "rapid, yet extremely beautiful riding;" seventh, "for modest, unassuming, dignified style;" eighth, for riding a pony which was "managed beautifully;" ninth, for "whose horse was obstinate, but was at length compelled to obey his fair rider;" tenth, "who only requires a little more practice to make her a good horsewoman;" and, eleventh, "who was not lacking in skill and fearlessness, but who was most unfortunate in her selection of a horse."

Each of these committee men, at the winding up of the exercises, should have been tied to the aporn strings of his favorite rider, and trotted around the ring.—*Cleveland Herald*.

RIDING AND DRIVING MATCH, BY LADIES.

The great Agricultural Fair of the State of New York, at Elmira, closed with a grand floral ball on Friday eve's, Oct. 5, given beneath a mammoth tent, by the citizens, followed on Saturday by highly interesting equestrian performances,

in which a number of ladies participated, in the presence of some 5,000 spectators. We give the following particulars from the N. Y. *Tribune*:

At 10 o'clock, A. M., the ladies who had entered for the prizes, convened at Haight's Hotel, where they formed in line. Fourteen of them were mounted on horses and four others in wagons, each lady being accompanied by one gentleman. The procession proceeded to the Fair ground, escorted by the committee and the gentlemen in waiting. Each lady was attired in a riding habit varying in color from the others, and forming altogether, a very pleasing and attractive appearance. Arriving at the grounds they were warmly received by the assembled multitude. On assembling around the judges stand, and after answering to their names, they received some instructions from the chairman of the judges, Col. S. G. Hathaway.

The *Tribune* here gives the names of fourteen ladies who were competitors for riding on horseback, (one from England,) and eight for driving in open buggy. The account then says:

The ladies on horseback were first sent out in couples, and for more than an hour and a half the skillful and graceful management of the horses was witnessed by the multitude with intense interest; and at times their approbation broke forth in enthusiastic applause. During the exercise, Mrs. Stephens, while testing her horse at full speed, was precipitated over his head in consequence of the animal coming to a sudden halt. Mrs. S. landed on terra firma without injury, and in a moment after was making good time around the course. Her riding was admired by all.

Miss A. M. Alexander, an excellent rider, was also thrown, in consequence of the breaking of the bridle, but was not injured.

An exciting trotting match came off between Mrs. C. M. Stephens and Mrs. M. Conover. The riding of the ladies and the speed of the horses was very nearly equal, and each temporary advantage one gained over the other drew forth the approbation of the audience.

Miss H. J. Chapman was fortunate in the possession of a very spirited and well trained animal, which enabled her to display superior skill in the management, and by many it was thought she had no equal present.

A contest took place between Mrs. Conover, Mrs. O. C. Childs, and Miss E. Council. This was a close contest, but Miss Council bore off the palm, and received the approbation of the audience.

Little Miss Eliza Ann Taylor, of Ontario county, a slight formed child, eight years of age, was the favorite. She sat upon a large iron-grey horse, with perfect ease and elegance, and as firm as if she had been fastened to the saddle. In one instance where some five or six ladies on the course were striving to take the lead, little Miss Taylor's horse appeared to enter the contest, and as if conscious of his precious burden, steadily increased his speed, with an easy motion, passing one, then another, until, on the third time round, the contestants were all distanced, and then dashed up in front of the judges' stand, amid the spontaneous cheers and applause of all who were witnesses.

In the driving, greater skill and management was shown than in the riding. Miss A. Finch, a little girl 10 years of age, surprised those present by driving a fine pair of prize horses. Mrs. F. S. Norton, of Onondaga county, in riding, could not display her skill to good advantage, in consequence of having been provided with an inferior horse. In the driving match, she was more fortunate in being provided with a very spirited horse. In driving around the ring, in company with others, the horse broke up, and showed a disposition to dash off, regardless of restraint, when a large number of spectators made a rush to stop him, but were kept back by the owner, and Mrs. Norton appeared to have perfect control. Shortly after the hind axle broke down, but by coolness and good management the horse was promptly stopped. An exciting trotting match came off, in which Miss Demarest and Mrs. Whitney drove, each lady availing herself of every advantage that offered. The first heat, the horses continued neck and neck, but on the second and third time around, Miss Demarest came in ahead. The driving of Mrs. P. Kinney, Miss Stephens and Mrs. S. Miller was also excellent, and these ladies also received a portion of the applause.

About 1½ o'clock, Col. Hathaway came forward and complimented the ladies for the highly creditable manner in which they had acquitted themselves, and remarked that the duties of the Judges were delicate, and they would find it very difficult to award the premiums, there being so many who were certainly entitled to the first. He then closed by

stating that the Judges would announce the premiums at the Height House, at 4 o'clock, P. M., at which time there was a large gathering in the halls, and the following premiums were announced:

To the best rider on Horseback.—1st. Mrs. M. Conover, Onondaga co., \$100; 2d, Mrs. H. T. Chammar, Yates co., \$50; 3d, Mrs. O. C. Childs, Onondaga co., \$25; 4th, Miss E. Council, Onondaga co., \$15; (and made up to \$50 by the committee) 5th, Mrs. J. B. Clark, Chemung co., \$10; 6th, Little Miss Taylor, Ontario co., (discretionary) \$15.

To the best Driver in Open Buggy.—1st. Miss E. Demarest, Chemung co., \$75; 2d, Mrs. F. S. Norton, Onondaga co., \$30; 3d, Mrs. V. Whiting, Pa., \$20; 4th, Miss C. M. Stephens, Cayuga co., \$15; 5th, Miss P. Kinney, Seneca co., \$10.

Discretionary Premiums.—Miss C. Wilcox, Chemung co., \$10; Mrs. J. H. Rodgers, Chemung co., \$10; Miss A. M. Alexander, Wilkesbarre, Pa., \$10; Miss S. C. Rodgers, Livingston co., \$10; Miss Franky Weyburn, Ontario co., \$10; Mrs. S. Minier, Chemung co., \$10.

FEMALE HORSEMANSHIP AT THE OHIO STATE FAIR.

DEAR "SPIRIT"—The Ohio State Fair, just closed, brought together the best stock of horses and cattle ever before exhibited in conjunction, in America. Among the old turfmen were Imported Monarch, and Kentucky Grey Eagle, both now owned in Ohio. These, with our Cadmuses, Trustees, Bellfounders, Black Hawks, &c., made up a show of royal blood exceeding any former Exhibition.

But I took up my pen to speak of the new feature of *female horsemanship*, which is becoming general at nearly all our Agricultural Fairs, and has done more to create and supply a demand for good saddle-horses than anything else yet brought forward.

On the last day of the State Fair (Friday, Sept. 21st,) the State Board yielded the use of the driving ring (one-fourth of a mile in circumference) for two hours, from 11 A. M. to 1 P. M., for equestrian exercises, under direction of Col. S. D. Harris, Editor of the *Ohio Cultivator*. Promptly at the hour, the Military Band, accompanied by the members of the State Board of Agriculture and several distinguished guests, took up a position in the centre of the area, when the band struck up a grand march, and the procession of equestrians entered, twenty-eight in number, each lady escorted by her cavalier, riding upon her right. The procession was led by Col. Harris, escorting his daughter, Jennie. The cavalcade wheeled to the right and circled to the left around the whole enclosure, which was densely surrounded by many thousand eager spectators.

After the first and second circuits had been made upon an easy gallop, the troop reined into the area, and the gentlemen, uncovering, saluted the State Board and the Band, circling around them upon the same place and then returned to the track. The gentlemen then countermarched, the ladies still going forward, and meeting, at a brisk gallop, on the opposite side of the ring, each gentleman wheeled in with his partner, and kept the pace forward with her until arriving at the other side of the circle, when the ladies countermarched in the same way, and again joined their escort on the opposite side. The whole party then countermarched, by an outward wheel from front to rear, and also in open order from rear to front, by inward wheel. A variety of other evolutions were executed in fine style, when the gentlemen were withdrawn, and the ladies took the track to themselves, and soon began to manifest a disposition to show some fast riding; and as they were well mounted, and skillful riders, they were permitted to have their own way, and such a way it was as made the forty thousand spectators hold their breath in astonishment!

Some of the horses were old racers, and the ladies were determined to get at their best speed. Where all succeed-

ed so well, it would be invidious to particularize. Among those who chanced to have the fastest horses were the accomplished young Miss Pelton, of Turnbull county, who sustained her reputation of being one of the hand-somest riders in the State. Mrs. Cornwell, of Columbiana Co., upon her Arabian stallion, Hassan—trained by herself—was equal to any emergency, and had the reputation of being the best horsewomen upon the ground.

A desire was expressed for a match between Mrs. Stombaugh, of Columbus, and Mrs. White, of Portsmouth, who seem to have the two finest horses. The two ladies took the track with their escorts, and after curvetting a couple of rounds, struck a full pace, Mrs. White being then some ten rods in advance, which distance she held during the first round; at the second round, Mrs. S. began to close the gap, the animals literally flew, and it was hard to tell which was horse and which was petticoat! the escort, in the mean time, having been left behind like drift-wood. At the end of the second round, Mrs. S. shot past Mrs. W. like an arrow, and led the race for half a round, when Mrs. W., unable to stop her horse, asked Mrs. S. to hold up, and Mr. W., taking a cut across the area, seized his wife's horse by the bridle, and in half a round more had it under control, and thus the match ended. The whole exhibition elicited unbounded applause, and was concluded without the slightest accident to mar the pleasure of the scene.

At the conclusion of the riding, Col. H. presented each female competitor with a handsome copy of the *Lady's Equestrian Manual*, and the State Board having reserved seats at the public table on the grounds, they were escorted to the pavillion, and sat down to dinner, all in the best humor, with the flush of exercise painting roses upon their cheeks, and making their pulses leap in healthful excitement. So we do these things in Ohio.

Truly, SCIORO,
[in Spirit of the Times.]

Columbus, O., Sept. 24, 1855.

FODDER PULLING—ITS EFFECTS ON THE CROP, &c.

EDITORS SOUTHERN CULTIVATOR—In the September number of your journal, in reply to my objections to Corn stalk Fodder, Pea Hay, &c., advocated by you in the July number, you say you did not use the word "*useless*" applied to Pulling Fodder. By examination, I discover you are right. Your language, though, was this: "We consider it a slow, laborious and poor business—one that 'does not pay' in any way, and which should be discontinued by all enlightened and economical planters." If I have misquoted your language, I have given you the meaning, which is about the same. I will now say, in advocating the common practice of Pulling Fodder, that unless your acre of corn, planted and cultivated expressly for fodder, is worth as much as my acre, planted for corn, fodder and peas, you are recommending that, of course, which does not pay us for our labor. When you speak of cultivating, we look for the profit and the easiest way of obtaining it. We might plant our cotton lands in Indigo, but we can't make it pay as much by it as we can to plant for Cotton. This is the reason we cannot take your advice in planting and cultivating expressly for fodder, even if the pulling of the fodder off our corn injured it to amount of the fodder (which I do not admit, and am well satisfied is not the case). We had better, then, cut and save Crab Grass hay, or prepare meadows for that purpose, which need no cultivation, than to take from our corn crops one acre intended for Corn and Peas, to plant for fodder alone, which could not realize to us one-fourth the profit that the same land would do in Corn and Peas. We don't cultivate for the fun of it; but it is the profit, that sweetens labor; and the intention of your journal is to

assist us in lightening the burden put upon ADAM and his posterity for disobedience. But to have this curse resting upon us, and the able Editors of the *Cultivator* against us, we would be in a deplorable fix.

Before I close, I wish to correct some errors in my communication in the September number, page 286, which, if it has any meaning at all, causes me to speak in rather light terms of the Editors of the *Cultivator*: this has never been my intention, neither was it my language. The words are in the 5th line—"you believe or expressed." Those words should not have been inserted; and the word *especially*, in the 34th line, should have been *expressly*. Now, Messrs. Editors, as we are inquiring for the easiest and most profitable way of cultivating, and for those products that bring in the most money, I will conclude with the appropriate words of DAVY CROCKET, "first be sure you are right, then go ahead." E. JINKINS.

Horse Pen, Choctaw Co., Miss., Sept., 1855.

P. S.—We have made bountiful crops of Wheat and Corn, in this county; and Cotton is doing about as well as could be expected, but half of it is too late to make a full crop. It has now a luxuriant weed, but it needs more time than it will get to make more than a half crop.

E. J.

REMARKS.—Our respected correspondent evidently does not understand our position on this question as we intended to be understood. The main feature of our proposition was, simply, that the *pulling of the fodder before the corn was fully matured, injured the grain to the full amount of the value of the fodder*, and that, therefore, it was not a paying operation, so long as from 3 to 8 tons of good corn-stalk fodder alone could be raised on one acre well manured and properly cultivated. This latter fact we know by experience; but as our correspondent seems to doubt the injury to his corn from stripping off the fodder, we will call upon the stand "a disinterested witness," Mr. J. H. BATTE, who furnishes the following article to the Richmond, Va., *Southern Planter*, of a late date:

PULLING FODDER INJURIOUS TO CORN.

MESSRS. EDITORS—During the past year I made an experiment to test the effect which the pulling of fodder would have upon the corn from which it was pulled. The result surprised me not a little; and as I think the experiment a valuable one, I herewith send you a full statement of the manner of conducting it, and the result. I selected a portion of my corn field in which the rows ran perpendicularly to a road, and counted sixty rows along the road. I then measured seventy yards along the rows on each side of the piece designed for the experiment, and marked off a line parallel with the road at seventy yards distance from it. This embraced 4,200 hills, from the alternate rows of which the fodder was stripped to the top, leaving the intermediate rows untouched. After the fodder was cured, I weighed it and found that I had just 200 pounds, which, at \$1 25 per cwt., is worth \$2 50.

The two parcels of corn were kept entirely separate until the test was fully made, which was done in the following manner:

Having the two piles before me, and wishing to ascertain the number of ears in each parcel, I commenced with that from which the fodder was pulled, and counted 75 ears into a basket, from each draft, until I had weighed the whole of it. I then went through the same process with that from which no fodder was pulled. By this counting I found that I had upwards of 100 ears more in the portion from which the fodder was not pulled. This surplus I divided between the two parcels, so as to equalize the number, and found that I had 1,119 pounds in the

former, and 1,362 pounds in the latter portion, being an increase of 243 pounds in favor of not pulling fodder.

I then shelled the same quantity from each parcel, to ascertain the portion to be deducted for husks. This amounted to one-fifth in each case.

The result gave 195 pounds of shelled corn, in the place of 200 pounds of fodder, which was suffered to remain on the stalks.

This lacks 1 pound of being $3\frac{1}{2}$ bushels, which, at 80 cents, would give \$2 80; showing a loss of 30 cents, which is equal to 48 cents per acre, besides the labor of pulling and securing the fodder.

To show that no exaggeration existed in this experiment, the ears were counted, and the number equalized, as before stated. The inequality may be accounted for in two ways. First, many ears were broken off in pulling the fodder; and secondly, many were prevented from maturing from having the fodder pulled from the stalks.

It may be supposed that this fodder was pulled too soon. In the common acceptance of the term such was not the case. I suffered it to stand until it was thoroughly ripe, or what is termed suffering for the want of pulling.

This experiment shows an entire loss of 18 bushels to the hundred, or one-sixth part of the crop. The above was an experiment allotted to me by the Prince George's Hole and Corner Club, of which I am a member. If you think it worth publishing, you are at liberty to use in that way. J. H. BATTE.

Advertisements.

FRUITLAND NURSERY.

TEN THOUSAND CHOICE TREES!

THE Subscriber offers for Fall and Winter Planting (1855-6) the following desirable trees, shrubs, vines, &c.:

APPLES.—A select list, of early, medium and late varieties, including many of the new and superior Southern seedlings, heretofore described in *Southern Cultivator*. 25 cents each; \$20 per hundred.

PEARS.—Dwarfs and Standards, many choice varieties. 50 cents each; \$40 per hundred. Extra large trees, \$1.

PEACHES.—A succession from June till October, including many native seedlings. 25 cents each; \$20 per hundred.

APRICOTS, NECTARINES, PLUMS AND CHERRIES, of the best varieties. 50 cents each; \$40 per hundred.

FIGS.—Several choice varieties, including the *Celestial*, *Alcant*, *Black Genoa*, &c., &c., 50 cents each.

GRAPES.—The genuine *Catawba*, from Axt's vineyards; also *Weller's Scuppernon*, &c. 50 cents each; \$30 per hundred.

QUINCES.—The Orange variety, well rooted and strong plants, at 25 cents.

STRAWBERRIES.—More than thirty Premium varieties, including all the most desirable. (See separate advertisement of select sorts, in present number.) Prices, 20 cents per dozen, or from \$1 to \$3 per hundred.

BLACKBERRIES.—The genuine New Rochelle or "Seacor's Mammoth." Berries of extra size and flavor. Well rooted plants at 50 cents each.

POMEGRANATES.—The sub-acid, or sweet variety, at 25 and 50 cents each according to size.

OSAGE ORANGE PLANTS FOR HEDGING.—A large quantity of vigorous plants, of 1 and 2 years growth, at \$5 to \$8 per thousand.

OSIER OR BASKET WILLOW.—Cuttings of the famous *Beerdigil* at \$10 per thousand, or \$2 per single hundred. Also, the *Viminalis*, at \$5 per thousand, or \$1 per hundred.

Orders will also be received for choice **ROSES, ORNAMENTAL SHRUBS AND TREES, EVERGREENS, VINES, GREENHOUSE PLANTS**, &c., &c.

The various Railroads diverging in almost every direction from Augusta, afford ample facilities for shipping to any part of the South. Trees will be carefully packed and forwarded by express or otherwise, with safety and despatch.

From middle of October until first of February is the proper time for transplanting—the earlier in the winter the better. Purchasers will be furnished with such (printed) directions for the planting and management of *Trees*, &c., as will (if strictly followed) insure success. Address D. REDMOND, Augusta, Ga.

Oct 5th—1f

DEVON GRADE HEIFERS FOR SALE.

SEVERAL GRADE or HALF DEVON HEIFERS, of various ages, from excellent Milking Cows, and sired by the prize Bull, "Keokuk," whose pedigree was published in September number (1853) of *Southern Cultivator*. For particulars of price, &c., address D. REDMOND, Augusta, Ga.



Nov 5th—1f

RANDALL & MERCER'S COTTON SEED DRILL.

ALL Planters have realized the want of a machine to drill Cotton Seed with regularity and certainty. One that would operate equally well on every kind of land, and at the same time be so simple in construction and operation that it could be used by negroes without the liability of getting out of order. A Drill which we think possesses all these qualities, we now offer to the planting community. After a thorough trial for the last two years, in different hands, on all kinds of land, we would state some of the advantages to be derived from their use:

1st. The saving of Seed, which will amount to enough in planting each hundred acres, to pay for the machine.

2nd. The saving of labor in planting, one horse and hand only being required to open the furrow, drop the seed and cover from seven to nine acres per day.

3rd. The great saving of labor in chopping out, the seed being deposited in a line one after another.

4th. The great saving in subsequent hoe work, owing to the fact that any good plow hand can, in sowing, cover all the first crop of grass in the drill, however small the cotton may be, without injuring the stand.

These advantages all farmers will appreciate; and below we give some certificates, from which the public can learn how our Drills are appreciated by gentlemen of the first standing in our section of the State—all practical farmers who have thoroughly tested them and are consequently fully competent to decide on their merits. We are now prepared to dispose of our rights to Counties and States on favorable terms. Here is an opportunity for a large number of young men to make fortunes, as the rights we offer are for a machine which every planter South will be obliged to have, and this is the first Cotton seed Drill ever invented which possessed advantages sufficient to bring itself into general use. Mr. J. P. STROZIER is our Travelling Agent, to dispose of the Patent Right for Counties and States.

CERTIFICATES.

This is to certify that I planted one hundred and sixty acres of cotton with Randall & Mercer's Planters, and consider them superior to anything of the kind I have ever seen or tried. The saving of seed alone would pay for the machines in a season or two, and I think a hand can do one-third more hoeing than he could in cotton planted the common way.

S. L. BARBER.

Lee County, Ga., July 3, 1855.

MESSRS. RANDALL & MERCER—Gentlemen:—In reply to yours of this date, I can say with satisfaction, that I have used your Cotton Seed Drills on the farm of D. A. Vason, Esq., with great success. I consider them to be of great value. They are a saving of about one-third of the labor of cultivating, about two or three bushels of seed to the acre in planting, and a great saving of labor in planting, as they open the furrow, drop and cover the seed with one horse and hand. I think them worth one hundred dollars a piece to any planter that plants full crops of cotton. As for myself, I would not plant a crop of cotton without them for no consideration in the world's of reason.

A. J. BARKSDALE.

Lee County, Ga., July 12th, 1855.

I have used Randall & Mercer's Cotton Planter two seasons, and consider them of great value to the farmer. I save seed enough each year to pay for the Planters, then I save at least one-third the labor of cultivation, as the cotton is sowed in so narrow a line that with good plowing there is but little hoe work needed. There is also a saving of hands and horses in planting. I should say they were worth one hundred dollars each, and recommend every farmer to use them.

S. D. McLENDON.

Lee County, Ga., July 9, 1855.

I have been overseeing for Mr. S. D. McLendon, the present year, and fully concur in his statement above.

DAVIDSON WARREN.

MESSRS. RANDALL & MERCER—Gentlemen:—I used one of your Cotton Seed Drills the past spring, and I feel four fold paid for what it cost me. To give your Drill a fair trial, I planted every other row with the Drill and the intervening rows I planted as well as ever cotton was planted before your Drill came into use. The result was, that in the row planted with your Drill I got a more perfect stand, and I think it grew off much better, besides I realized a great saving in the labor of working over my cotton the two first times. I shall continue to use them as long as I plant cotton.

Remain yours, &c.,

JESSE COCK.

Lee County, Ga.

This is to certify that I used one of Randall & Mercer's Cotton Seed Drills last year in planting my crops and was well pleased. I have used five of them the present year, planting my entire crop, and am still better pleased. There is a saving of between two and three bushels of seed to the acre in planting, besides, one horse and one hand with these drills does the work of three hands and two horses. Then there is a saving of two thirds of the hoe work, the cotton being in so straight and narrow a row. I consider them worth one hundred dollars each to any planter, and recommend all to purchase and use them.

WM. H. OWENS.

Dorchester County, Ga., July 16, 1855.

MESSRS. RANDALL & MERCER—Gentlemen:—In reply to yours, I will only say I have used three of your Cotton Seed Drills, and consider them of great value, from the fact that in the use of them I saved from two to three bushels of seed to each acre planted, and at least one-third of the labor of cultivation, not requiring one-half as much hoe work as the old way of planting. I never expect to plant cotton without them, if I can get them at any price. I have planted eight acres

per day to each Drill. They are simple—easy managed, and there is no difficulty about getting a good stand.

Very respectfully,

WM. F. HAMRICK.

Lee County, Ga., July 12, 1855.

MESSRS. RANDALL & MERCER—Gentlemen:—I have used eight of your Cotton Seed Drills, manufactured by J. H. Watson, on Col. Joseph Bond's Fowl Town Plantation. I am much pleased with them, having realized great saving of seed, of labor in planting and chopping out, and the hands at the first sowing could go over at least one-third more in a day, and do better work than in cotton planted in the best way I could plant with colter and block. I have no hesitation in giving it as my opinion that in the use of your Drills there is a saving of one-third of the labor of cultivating a cotton crop. Col. Bond is pleased with them and will continue their use.

Yours respectfully,

JAMES CREEK.

Fowl Town, Ga., July 9, 1855.

This is to certify that I have used two of Randall & Mercer's Cotton Planters, and have no hesitation in saying that they will do. The saving of labor in planting is an object, the saving of seed is an object and the cotton stands in such a narrow drill that it may almost be kept clean without the hoes. There is nothing to equal them in planting cotton.

W. B. REYNOLDS.

Lee County, Ga., July 1, 1855.

Deeming the above a sufficient amount of evidence as to the great value of our Drills, we would simply state that any information desired concerning them or the patent, can be obtained by addressing us at this place.

RANDALL & MERCER.

Palmyra, Lee Co., Ga., Nov., 1855.—tf

DOWNING HILL NURSERY.

THIS establishment has been greatly enlarged during the past season, and now embraces one of the largest and best collection of FRUIT TREES, VINES, &c., in the South. It is the determination of the proprietors (and they are now preparing) to extend their operations so as to compete, in extent, quantity and variety, with any Nursery in the whole country; and they sincerely hope that the Southern country will patronize, with a fair liberality, this useful and necessary branch of industry, and not give the preference to Northern Nurseries, as has hitherto been the custom.

We have on hand a very large stock of TREES, consisting of 150 varieties of Apples, including 75 Southern varieties; 91 of Pears; 25 of Plums; 20 of Cherries; 12 of Nectarines; Almonds, Figs, Raspberries, Mulberries, Pomegranates, Grapes, Quinces and Strawberries; a fine and large collection of Roses on their own roots, together with a few choice Green-House and Evergreen Plants; shrubbery, &c., &c.

This being one of the finest localities in the South for the propagation and raising of Fruit Trees, combined with its shipping facilities, enabling us to send packages to every part of the country, renders it a desirable point from which to order them. The greatest care and diligence will, at all times, be observed to please and satisfy those who will be kind enough to oblige us with their orders.

Descriptive Catalogues on application.

W. H. THURMOND & Co.,

Nov 5—tf

Atlanta, Ga.

TROUP HILL NURSERY, MACON, Ga.

THE SUBSCRIBER offers for sale a fine assortment of grafted FRUIT TREES of superior quality, comprising all the best new Southern varieties.

The collection of Ever blooming ROSES is unrivalled in the South. Further—30 new varieties of CHRYS. ANTHEMUMS; 20 varieties of VERBENAS, the best on both sides of the Atlantic; DAHLIAS, ERYNGIENS, etc., etc. Address ROBERT N. NELSON,

Nov 5—tf

Macon, Ga.

BLACK ESSEN PIGS.

FOR SALE, a few pairs, three to four months old at \$20 per pair. For Lot Hogs, I consider this breed superior to any other—they cannot be made to take the mange, and are free from cutaneous eruptions and disease of the lungs, to which hogs are so liable when confined in dens in a Southern climate.

Nov 5—tf

Address

R. PETERS, Atlanta, Ga.

J. M. NEWBY & CO.,

(Augusta, Ga.)

UNDER THE UNITED STATES HOTEL.

HAVE just received the largest and choicest lot of fine CLOTHING they have ever offered to their customers and the public. Those in want of the newest styles of goods are invited to call and look at them. Also a fine lot of Boys' and Youths' CLOTHING.

Nov 5—3t

PATENT SELF-SHARPENING STRAW AND SHUCK

Cutters.

WE call the attention of Planters to our Self-Sharpening Straw and Shuck CUTTERS. The only Knife which will cut Shucks Stalks and Straw to perfection, and sharpen itself.

Nov 5—3t

JOHN & THOS. A. BONES.

GRADE CASHMERE GOATS.

FOR SALE, a few half blood BUCKS at \$30 each.

Nov 5—tf

Address

R. PETERS, Atlanta, Ga.

FERTILIZERS.

HITHERTO the Planters of the South have been dependent on the North for all the artificial fertilizers they have used. The New Orleans Bone Black Company recently established in this city, with facilities for the manufacture of manures second to none in the United States, are prepared to fill orders for the following FERTILIZERS at the same prices charged in Baltimore and New York:

GROUND BONES.—For fruit trees and grape vines these are particularly beneficial. Five hundred pounds applied to an acre of ordinary pine wood land, aided by good, deep plowing, will produce a crop of Cotton as large as any of the best bottom lands. It is ground both fine and coarse, and is put up in barrels. The coarse is 1½¢ per pound—the fine and sifted, 1¼¢ per pound. Its great durability in the soil renders it the cheapest manure in use.

PHOSPHATED GUANO.—This valuable fertilizer, composed of equal parts of Peruvian Guano and fine Bone Dust, is, in every respect, superior and far more lasting than Guano used by itself. It is an established fact that Guano lacks Phosphate of Lime, and also, that one half of its fertilizing qualities are dissipated in the air, which is plainly to be perceived by the strong ammoniacal smell constantly emitted by it until its strength is gone.

Bone Dust is nothing more than Phosphate of Lime, and this, besides being a strong and valuable manure, fixes the Ammonia in the Guano and retains it until it is absorbed by the plants. A trial of this fertilizer will satisfy any one of its durability and superior efficacy to simple Guano. Three hundred pounds applied to the acre will show its effects for five years or more, by an annual increase of at least 10 percent in the crops. Put up in barrels of about 200 pounds each, at 2 cents per pound.

SUPER-PHOSPHATE OF LIME.—This highly concentrated manure is composed of Animal Matter, Sulphuric Acid, Bone Dust, Gypsum and Sulphate of Iron, each of which, by itself, is a powerful fertilizer.

Five hundred pounds, or about two barrels of this Super-Phosphate of Lime have been found to be fully equal, in beneficial effects, to thirty wagon loads of ordinary Stable Manure.

The convenience of this article consists in its small bulk and consequent ease of handling. It may be used before or after planting of the crop. A tablespoonful put in each hill of Corn or Cotton, has been known to increase the yield twenty per cent. Five hundred lbs. to an acre of common piney woods land having a clay subsoil, will enable it to yield as good a crop as any ordinary bottom land. A single hundred pound applied as a top-dressing to an acre of meadow land, will increase its products at least a ton of hay. To Horticulturists, it is invaluable, as it may be applied to Fruit Trees at any season of the year. More than two thousand bushels of Ruta Baga Turnips have been raised to the acre, by the application of 200 lbs. of this fertilizer. For Garden crops, it is all that is necessary for success.

The Super-Phosphate of Lime is put up in barrels containing about 200 pounds, and is sold at 2 cents per pound.

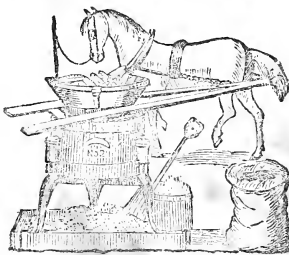
POUDRETTE.—Two large establishments in New York, turning out over fifty thousand barrels annually, are not able to supply the demand of the market gardeners in the vicinity of that city for this justly popular manure. It is composed of night soil, deodorized and made into a powder similar to Guano, and is put up in barrels at \$2.50 per barrel.

Orders by mail or otherwise, addressed to the subscriber, will receive prompt attention.

D. C. LOWBER,
37 Foydrass street.

Land Plaster, Peruvian Guano and Land Lime may also be ordered at the above address. July—tf

SCOTT'S LITTLE GIANT CORN AND COB CRUSHER.



THE attention of Planters and Stock-Feeders is respectfully called to this Mill, as the best and most profitable article now in use. In setting up, no mechanical work is required, it being only necessary to fasten it down to a floor or platform.

No. 2 will crush 10 bushels per hour with one horse, and it is sold for \$25, all complete, ready for attaching the horse.
No. 3, at \$65, grinds 15 bushels per hour; and No. 4, at \$75, grinds 20 bushels per hour with two horses.

CARMICHAEL & BEAN, Agents,
Augusta, Ga.

AUGUSTA, GA., April 8, 1855.

I have been running one of Scott's Little Giant Corn and Cob Crushers, No. 4, for the last five weeks, and it performs to my entire satisfaction. It was warranted to grind 20 bushels per hour, but I have ground over 35 bushels in an hour and a half, or equal to 23½ bushels per hour. In feeding 30 horses, I save at least 100 bushels of Corn per month, it now requiring only 200 bushels of Corn with the cob, where I formerly fed 300. I consider it decidedly the best kind of Crusher ever got up, and if I could not replace mine I would not sell it for \$500.

June 5—tf

I. D. MATHEWS,
Proprietor of the Augusta Omnibuses.

EXTENSIVE COLLECTION OF SELECTED ROSES AND SOUTHERN RAISED FRUIT TREES.

AUGUSTA NURSERY.

F. A. MAUGE would respectfully inform the amateurs of Roses, that he has now a superb collection of new and rare varieties, which he will be happy to supply to such as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camelia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE, Augusta, Ga.

P. D. GATES, COMMISSION MERCHANT,

AND Dealer in AGRICULTURAL IMPLEMENTS and MACHINERY, No. 12 Broadway, New York.

Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Powers and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines. June 5—Cly*

75,000 FRUIT TREES

OF Southern growth and perfectly adapted to this climate, are now offered for sale at the Mississippi Nurseries. Persons in want of superior FRUIT TREES at moderate prices would do well to send in their orders early. We can supply the Apple in 480 varieties from 1 to 4 years old; the Pear in 450 varieties, both Standard and Dwarf, from 1 to 3 years old; the Peach in 100 varieties from 1 to 3 years old, and other fruits in all the best varieties. The celebrated Southern Seedling APPLES and new European PEARS can be supplied in limited quantities.

Priced Catalogues sent to all applicants, and all orders promptly attended to. Address C. M. SWASEY & CO., Yazoo City, Miss. Oct 5—6t

AGRICULTURAL MACHINES AND IMPLEMENTS.

SMUT MACHINES—Luck's or Pilkington's—the best and cheapest made. Price \$60. **HORSE POWERS AND THRESHERS**; Allen's and Emery's superior Fendless Chain and 3 Taplin's or Eddy's, Grubbs', Bogardus and other CIRCULAR HORSE POWERS. **THRESHERS**, with or without Separators. **GRAIN MILLS, CORN SHILLERS, PLOWS** of all kinds, **STRAW CUTTERS**, &c. Also, a general assortment of the best made and most approved Agricultural and Horticultural IMPLEMENTS. Field and Garden SEEDS, GUANO, BONE DUST, &c. For sale by R. L. ALLEN, Oct 5—31* 189 and 191 Water street, New York.

CARMICHAEL & BEAN,

DEALERS in HARDWARE, CUTLERY and AGRICULTURAL IMPLEMENTS, Augusta, Ga.

We are, also, Agents for the following articles:—SALAMANDER SAFES, made by Stearns & Marvin, New York; LITTLE GIANT CORN AND COB MILLS; Indian Rubber BELTING, PACKING and HOSES, made by Boston Belting Company; ATKINS' SELF RAKING REAPER; CIRCULAR SAWS, made by Hoar & Co., and Welch & Griffith's HORSE POWERS; FAN MILLS, THRESHERS and SMUT MACHINES. CARMICHAEL & BEAN, April 5—Cly Augusta, Ga.

TO THE FARMERS AND PLANTERS OF THE SOUTH.

THE undersigned have received the exclusive Agency for the entire South and Southwest for the very best CORN and COB CRUSHERS now in use, and the only articles of the kind that will make fine meal, suitable for the table—this they are guaranteed to do. These Mills will effect a saving of 28 per cent., or fully one-third, in crushing the food prepared for stock, as has been satisfactorily tested. Price from \$50 to \$75. Every Farmer and Planter in the land should have them.

Manufactured and for sale by W. S. HENRY & Co., Meeting street, near Line street, Charleston, S. C.; MCCREERY & HOOKE, Brown's Wharf, Charleston, S. C. and J. A. ANSLEY, Commission Merchant, Broad street, Augusta, Ga.

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I HAVE a very superior kind of WHITE WHEAT that I will engage to those who may want to purchase for seed wheat of the next crop, to be delivered at the La Grange depot in good, strong sacks, containing not more than one bushel unless ordered, nor less than a half; marked with the name of the purchaser and place of delivery. This Wheat is of the very earliest and best kind. Sown any time in November, and cut by the 20th of May. It has been exhibited at four different Fairs, and have obtained a premium in every instance. I have already made many engagements for the next sowing at five dollars per bushel. No Delivery no pay.

P. H. GREENE

La Grange, March 22d, 1855.

April 2—tf

SHEPHERD'S DOGS, SHEEP, PIGS, &c.

FOR sale, a very superior and well trained English SHEPHERD'S DOG, imported by the subscriber last season. Also, a fine lot of COTSWOLD SHEEP, Buck Lambs, and CUPPOLK PIGS. Address: JOHN GILES, South Wadsworth, Conn.

VERBENAS.

THE Subscriber would respectfully invite the attention of Florists and all lovers of this beautiful bedding plant to his extensive collection, numbering upwards of 300 varieties, and comprising every variety worthy of cultivation that has been sent out, up to the present time. Price from \$1 to \$3 per dozen.

Descriptive Catalogues sent to all applicants, enclosing a penny stamp. As he devotes his time exclusively to the raising of this particular flower, he is confident that he can give entire satisfaction. Fine strong and well wooded plants ready to send South by the middle or last of October. Address: DEXTER SNOW, Chicopee, Hampden Co., Massachusetts.

THE SOUTHERN NURSERIES,

WASHINGTON, ADAMS & CO. MISS., are now well stocked with all the varieties best adapted to the South, of FRUIT TREES and SHRUBS, VINES, STRAWBERRY PLANTS, &c.; and of ROSES and other ORNAMENTAL SHRUBS and TREES, EVERGREENS, &c., all of southern growth, and of good size.

The packing is so carefully attended to, that Trees and Plants, Roses, cuttings for bedding, &c., are sent to all parts of the South, with scarcely a chance of their being injured.

Catalogues will be sent on application.

Nov-4. THOMAS AFFLECK.

AFFLECK'S**SOUTHERN RURAL ALMANAC.**

A handsome little volume, full of useful and interesting hints on RURAL AFFAIRS IN THE SOUTH. WILL BE ISSUED AS USUAL ABOUT THE FIRST OF NOVEMBER. Price 10 cents.

AFFLECK'S COTTON PLANTATION RECORD AND ACCOUNT BOOK.—New Edition, now ready.—No 1, for forty hands or less, \$2 50. No. 2, for eighty hands or less, \$3 00. No. 3, for one hundred and twenty hands or less, \$3 50.

AFFLECK'S SUGAR PLANTATION RECORD AND ACCOUNT BOOKS.—No. 1, for 50 hands or less, \$3 00. No. 2, for 120 hands or less, \$3 50.

These Books are now in general use amongst Planters. They will be sent by mail, prepaid and carefully enveloped at the above prices, and when five copies are ordered by clubs, and remitted for, an additional copy will be sent as commission to the individual making up the Club. Orders solicited from Booksellers and other dealers, to whom a liberal discount will be made.

B. M. NORMAN, Publisher, 14 Camp street, New Orleans.

CHEROKEE!**A VALUABLE LOT OF LAND FOR SALE.**

THE subscriber offers for sale a very attractive and valuable lot of LAND, situated between three and four miles from the flourishing city of Rome, Ga.

The tract contains Three Hundred and Twenty acres of good upland, well adapted to the growth of all the small grains, Irish and Sweet Potatoes, Peas, the Grasses, such as Clover, &c., and peculiarly suitable for FRUIT-GROWING, as it is situated on an elevated plateau above the reach of ordinary frosts. A beautiful

NATURAL POND OR LAKELET

of the purest water, occupies the centre of the tract. The margin of this lakelet affords one of the most attractive sites imaginable for a Country Residence; as the supply of water never diminishes, and is of great depth and clearness. It is fed by subterranean springs, and has no perceptible inlet or outlet. The tract is

HEAVILY TIMBERED

with Oak, Hickory, Chestnut, &c., and an abundance of PINE, and is within a mile and a quarter of two good SAW MILLS. It also contains an inexhaustible quarry of superior LIMESTONE, which may easily be made available for Agricultural and Building purposes. The improvements consist of a very comfortable Log House, with outbuildings, a well of good water, &c., with twenty or thirty acres under cultivation.

The attention of Fruit-Growers, Stock Raisers, and all desirous of a delightful situation in a salubrious and healthy climate, within easy reach of the best society, is particularly invited to the above tract.

September-14 D. REDMOND, Augusta, Ga.

1855! CLOAVING NURSERY.**1855!**

THE Subscriber having added many additional varieties of Southern Seedling FRUIT TREES to his former stock, comprising some fifty varieties of Apples, one hundred of Pears, twenty of Cherries, twenty of Peaches, Nectarines, &c., and being re-assured of their superiority over those raised in Northern Nurseries with confidence, founded on experience, again offers them to the attention of Southern Farmers, Planters and Pomologists at such prices as, he hopes, will leave no excuse for continuing to import them. Our trees are all grafted on seedling stocks two years old before grafting, consequently have good roots.

R. K. LAUGHLIN, Esq., 145 Carondelet street, New Orleans, is our Agent for Mississippi, Louisiana, and Southern Alabama.

* Catalogues for 1855 sent (gratis) to all applicants.

J. VAN BUREN, Clarksville, Habersham Co., Ga.

Aug 55-44

C. M. SAXTON, 152 Fulton street New York, published the following

BOOKS FOR THE COUNTRY.

Sent free of postage to any part of the United States.

- 1 Browne's American Field Book of Manures, \$1 25.
- 2 Brown's American Poultry Yard, twenty sixth thousand, \$1.
- 3 Browne's American Bird-Fancier, cloth, 50c.
- 4 Dadd's American Cattle Doctor, cloth, \$1.
- 5 Dana's Muck Manual, cloth, \$1.
- 6 Dana's Prize Essay on Manures, 50 cts.
- 7 Stockhard's Chemical Field Lectures, \$1.
- 8 Blake's Farmer at Home, \$1 25.
- 9 Buist's American Flower Garden Directory, \$1 55.
- 10 Buist's Family Kitchen Gardener, 75c.
- 11 Norton's Elements of Scientific and Practical Agriculture, 6c.
- 12 Johnston's Gechemistry of Agricultural Chemistry, for schools, 75c.
- 13 Johnston's Elements of Agricultural Chemistry and Geology, \$1.
- 14 Johnston's Lectures on Agricultural Chemistry and Geology, \$1 25.
- 15 Downing's Landscape Gardening \$2 50.
- 16 Fessenden's Complete Farmer and Gardener, \$1 25.
- 17 Fessenden's American Kitchen Gardener, 25c., cloth 50c.
- 18 Nash's Progressive Farmer, 60 cents.
- 19 Richardson's Domestic Fowls, 25c.
- 20 Richardson on the Horse; Varieties, Breeding, &c., 25 cts.
- 21 Richardson on the Diseases and Management of the Hog, 25 cts.
- 22 Richardson on the Destruction of the Pests of the Farm, 25 cts.
- 23 Richardson on the Hive and Honey Bee, 25 cts.
- 24 Milburn and Stevens on the Cow and Dairy Husbandry, 25 cts.
- 25 Skinner's Elements of Agriculture, 25c.
- 26 Topham's Chemistry made easy for the Use of Farmers, 25 cts.
- 27 Allen's Treatise on the Culture of the Grape, 8c.
- 28 Allen on the Diseases of Domestic Animals, 75c.
- 29 Allen's American Farm Book, \$1.
- 30 Allen's Rural Architecture, \$1 25.
- 31 Pardee on the Cultivation of the Strawberry, &c., 50 cts.
- 32 Padder's Farmer's Land Measurer, 50 cents.
- 33 Phelps' Bee-Keeper's Chart, 25 cents.
- 34 Guenon's Treatise on Milk Cows, illustrated, 38 cts.
- 35 Gunn's Domestic Medicine, a book for every married person, \$2.
- 36 Randall's Sheep Husbandry, \$1 50.
- 37 Youatt, Randall and Skinner's Sheep-Book, \$2.
- 38 Youatt on the Breeds and Management of Sheep, 75c.
- 39 Youatt on the Horse, \$1 25.
- 40 Youatt, Martin, and Stevens on Cattle, \$1 25.
- 41 Youatt and Martin on the Breeds and Management of the Dog, 75 cents.
- 42 Munn's Practical Land Drainer, 50 cts.
- 43 Stephens' Book of the Farm, complete, 450 illustrations, \$4.
- 44 The Architect; or, Plans for Country Dwellings, \$6.
- 45 Thier, Shaw, and Johnson's Principles of Agriculture, \$2.
- 46 Smith's Landscape Gardening, Parks and Pleasure Grounds, \$1 25.
- 47 Weeks on the Honey Bee, 50 cents.
- 48 Wilson on the Cultivation of Flax, 25 cents.
- 49 Miner's American Bee Keeper's Manual, \$1.
- 50 Quinby's Mysteries of Bee Keeping, \$1.
- 51 Cottage and Farm Bee Keeper, 50 cents.
- 52 Ellis's American Fruit-Grower's Guide, \$1 25.
- 53 The American Florist's Guide, 75 cts.
- 54 Every Lady her own Flower Gardener, 25 cents, cloth, 50 cts.
- 55 The American Rose Culturist, paper, 25 cents, cloth, 50 cents.
- 56 Hoare on the Cultivation of the Vine, 70 cts.
- 57 Chorlton's Cold Grapes, from direct American Practice, 50 cts.
- 58 Saxton's Rural Hand Books, 9 vols., \$2 50.
- 59 Bennett's Rabbit Fancier, 10 cents.
- 60 Remondin's Vine-Dresser's Manual, 60 cts.
- 61 Neill's Fruit, Flower and Veg. table Gardener's Companion, \$1.

Oct 5-21

H. V. V. S. SELLING STRAWBERRY PLANTS.

10,000 STRAWBERRY PLANTS, one year old; warranted to bear next spring, if planted according to the directions, which will be furnished. Printed directions for their culture will be sent with the plants when ordered. Orders from the country solicited. Price \$2 per hundred. WM. HAINES, Broad st., N. Y. 55-14 Augusta, Ga.

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BLUE GRASS; HERDS GRASS; RED and WHITE CLOVER; Timothy, Orchard, Lucerne and Musquit GRASS SEEDS, in quantities to suit purchasers. For sale by WM. HAINES, Nov 5-14 Augusta, Ga.

FOR SALE!

A SEA Island Cotton Plantation, containing 200 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skidaway Island, in Chatham county, on a bold salt water river, the health of which is unquestionable, and the facility for manuring with marsh mud is unsurpassable, the land lying three sides on the river. The place is situated 11 miles from Savannah. The lands of Skidaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters and for stock raising. Price \$3,500. Terms accommodating. Apply to S. F. DUPON, Savannah. Feb of Hope, March 9, 1855. April-14

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PREMIUM STRAWBERRY PLANTS!

Now is the time!!

 THIRTY Premium varieties, including such choice kinds as HOVEY'S SEEDLING, LONGWORTH'S PROLIFIC, McAVOY'S SUPERIOR, BLACK PRINCE, CRESCENT SEEDLING, CRIMSON CONE, &c., &c., may be obtained in large or small quantities, from the subscriber. Plants properly set out in November or December, will bear abundant crops of fruit the following spring. See November number of *Southern Cultivator* for full directions, which will be furnished to all purchasers. Price of Plants, 50 cents per dozen, or from \$1 to \$3 per hundred. The plants can be packed so as to go almost any distance in perfect condition. All varieties warranted true to name, and orders promptly attended to. Address: D. REDMOND, Augusta, Ga. Nov55—tf

AGRICULTURAL AND MECHANICAL IMPLEMENTS!

Mechanics' and Builders' Materials, Hardware, Cutlery, and Furnishing Goods!!



WE have now in store, and will continue to keep a large assortment of the most approved AGRICULTURAL IMPLEMENTS, for Southern use, consisting of single and two horse Turning Plows, 15 varieties; Double Michigan, Double Mould Board and Hill Side Plows; Subsoil Plows, several kinds; Forman's Patent Plow; Cultivators; Harrows, 3 kinds; Corn Shellers, 6 kinds; Straw Cutters, 10 sizes and kinds; Road Scrapers; Horse Hoes; Horse Powers and Threshers, 5 varieties of each; Fan Mills; Grain Cradles; Grass Scythes and Handles; Smit Machines; Bush Hooks; Pruning and Hedge Shears; Pruning Saws and Chisels; Sausage Meat Cutters and Stuffers; Farmers' Boilers, for boiling food for stock; Churns; Hay and Garden Rakes; Hay and Manure Forks; Hoes, Spades, Shovels, Grain Scoops, Wheel-Barrows, Field and Garden Rollers; Corn Planters; Scales; Store, Warehouse and Depot Trucks; Well and Horse Buckets; Pump Chain and Fixtures; Rock Salt for Stock.


WE keep extra POINTS for our Plows, and will furnish, at short notice, such parts of Plows and other implements as may be wanted to replace broken pieces.

Gentlemen's and Boy's TOOL CHESTS complete, &c.

We are also Agents for selling the following articles:—SCOTT'S LITTLE GIANT CORN AND COB CRUSHERS, universally admitted to be the best Crushers ever invented, and in the use of which, for feeding stock, a saving of one-third is made, as has been proved beyond dispute; Hoo & Co.'s and Welch & Griffith's CIRCULAR SAWS and SAW GUMMERS; Stearns & Marvin's celebrated Fire, Powder and Burglar Proof SALAMANDER SAFES; ROTARY SMOOTHING IRONS, heated with Alcohol—no family should be without this very useful article.

*. All the above are offered for sale at fair and regular prices, in connection with our extensive stock of Hardware and Cutlery. Nov55—6t CARMICHAEL & BEAN, Augusta, Ga.

MERINO RAMS FOR SALE.

 The Subscriber offers for Sale several full-blood MERINO RAMS. Having reduced the number of my flock, I have more rams than I need. They are from two of the best flocks in New York, and their fleeces, both in fineness and quantity, running from 9 to 14 lbs. July—tf J. B. JONES, Birdsville, Burke co., Ga.

1855!

SOUTHERN CULTIVATOR,

A MONTHLY JOURNAL,

DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE
Horticulture, Stock Breeding, Poultry, Bees, General Farm Economy, &c., &c.

Illustrated with Numerous Elegant Engravings.

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The Thirteenth Volume will commence in
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Augusta, Ga.

 THE SUBSCRIBER offers for sale a very choice and rare collection of Hardy Ornamental Plants, embracing all the fine old and best new varieties of Everblooming ROSES; also, an unrivalled collection of EVERGREENS, of every variety; Deciduous Ornamental TREES and PLANTS; and a collection of GREEN HOUSE PLANTS, unequalled in the South.

All orders promptly attended to, and plants packed to go any distance in safety. Any information required will be cheerfully given. Address: J. W. BESSMAN, Augusta, Ga. Mov55—4t

SOUTHERN CULTIVATOR FOR 1854.

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THE Subscriber offers for sale Forty Thousand Acres of the most productive COTTON LAND, in the Southern country, situated in the counties of Lee, Dougherty and Baker, in bodies of five hundred and two thousand acres each, a part of which is partially improved.

For certainty of crops and durability these Lands are unequalled in the Southern States. Similar lands contiguous in cultivation, are yielding an average of seven bales Cotton, per hand, for a series of years, and eighteen to twenty-five bushels Corn per acre.

Terms liberal. If desired, a credit of one to five years will be given. WM. W. CHEEVER, Albany, Ga., March 15. 1855. April—tf

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A SUPPLY of Fresh Red and White CLOVER, HERDS GRASS, TIMOTHY GRASS, BLUE GRASS, EGYPTIAN MILLET SEED. Just received and for sale in quantities to suit purchasers. WM. HAINES, 217 Broad st., Augusta.

Oct55—2t

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 10,000 APPLE TREES, embracing 150 varieties, and many of the best Southern kinds.

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 CHERRIES, both Standard and Dwarf.
 PEACHES, NECTARINES, APRICOTS, PLUMS, FIGS, GRAPE VINES, SERVICE TREES and all other Fruits. RASPBERRY and STRAWBERRY PLANTS, in variety.
 8,000 ROSES of the most celebrated kinds; Ornamental Deciduous TREES and SHRUBS; RARE EVERGREENS, &c.

Catalogues sent on application. We can forward packages by Express, which will go surely, and with despatch. Address SUMNER & CRAMMOND, Pomaria, S. C. Oct55—8t

SOUTHERN CULTIVATOR.



DEVOTED EXCLUSIVELY TO THE IMPROVEMENT OF SOUTHERN AGRICULTURE.

VOL. XIII.

AUGUSTA, GA., DECEMBER, 1855.

NO. 12.

WILLIAM S. JONES, PUBLISHER.

DANIEL LEE, M. D., AND D. REDMOND, EDITORS.

[CIRCULAR.]

TO THE PLANTERS, FARMERS, HORTICULTURISTS AND RURAL RESIDENTS OF THE SOUTH!

This number of our journal completes the present volume. The *Southern Cultivator* is now thoroughly and permanently established, having been before the public for *thirteen years*, though (we regret to say) many of our people who cultivate and gain their living from the soil, are still apparently ignorant of its value.

You, however, who have perused its pages for any length of time, are now competent to judge of its merits; and, we doubt not, will feel willing to point out its peculiar advantages to your friends and neighbors, who have not yet become acquainted with its aims, objects and utility.

These aims and objects are, briefly, to improve the Agriculture and Horticulture of these Southern States, and to contribute, as far as possible, to the enjoyment, elevation and profit of those who are endeavoring to build up our great and important rural interests.

Judging from numerous and constantly-repeated words of approval which we are daily receiving from subscribers in all parts of the South, we believe the *Cultivator* is properly appreciated and doing much good wherever it is known and circulated. There is yet, however, (as before stated) a large class of agriculturists in the South who have scarcely even *heard* of it; and to reach this class, we request the assistance of all our present readers and subscribers.

To extend its circulation, it has been usual with some of our zealous friends and co-workers to go about among their friends and neighbors and *form clubs*, which often number from twenty to one hundred, or even more.

We are aware that many otherwise sensible people have imbibed a prejudice against what they style "book farming;" but as well might they decry and condemn "book doctoring," "book lawyering," "book preaching" and all other descriptions of learning gleaned from books. When it is remembered that "book farming" is generally the recorded *experience* and *practical deduction* of our best, wisest and most successful agriculturists, who greatly enlarge their audience by *writing out* instead of *speaking*

their views and opinions, and who thus place on permanent and enduring record much that would otherwise die with them and be lost forever: it must be evident that all such prejudice as we have alluded to has no good foundation, and is unworthy of this age of improvement and progress.

With the hope, then, of increasing the circulation and usefulness of the *Cultivator* throughout the South, we confidently rely upon the vigorous aid and co-operation of all our present subscribers; each of whom, we trust, will add many *new* names to his own, and forward to us before the beginning of our next volume, in January, 1856.

TERMS OF THE CULTIVATOR.

One Copy, 1 year...\$1 | Twenty-five Copies, 1 year...\$20
Six Copies, " " " 5 | One Hundred " " " 75

And, by way of offering further inducements to exertion, and as a slight remuneration to those who may be disposed to exert themselves in our behalf, we cheerfully offer the following

PREMIUMS.

1. For every Fifty Dollars sent us, we will forward Fifty Copies of the *Cultivator* for one year, as we may be directed, and award the person who sends the money Fifteen Dollars worth of choice Fruit Trees or Books of his own selection.

2. For Twenty-Five Dollars, we will send 25 copies of the *Cultivator*, and \$7 in choice Fruit Trees or Books, as before.

3. For Fifteen Dollars, 15 copies of the *Cultivator*, and \$4 in Fruit Trees or Books.

4. For Ten Dollars, 10 copies of the *Cultivator*, and \$2 50 in Fruit Trees or Books.

5. For Five Dollars, 5 copies of the *Cultivator*, or 5 copies and \$1 25 in Trees or Books.

In all cases where it is not convenient to send trees or books, or where the parties prefer it, we will send the *cash*, or they can retain the proper proportion, as above, in remitting.

The postage on the *Cultivator*, when prepaid at the office where it is received, is only about *six cents per year*! Sample numbers always sent *gratuitously*, when desired. Large sums of money may be sent in checks or drafts, payable to WM. S. JONES. The Bills of all specie paying

Banks received at par. All money remitted by mail, postage paid, will be at the risk of the Publisher.

READER! will you not use your influence to form a Club at once, in your vicinity, and forward us the list before the beginning of our new volume, in January?

Address: WM. S. JONES, *Augusta, Ga.*

 SEE TERMS ON LAST PAGE.

Plantation Economy and Miscellany.

A CHAPTER ON FISH—FISH PONDS AND ARTIFICIAL FISH BREEDING.

BY REV. JOHN BACHMAN, D. D., OF CHARLESTON.

Read before the State Agricultural Society of South Carolina, at Columbia, 1855.

EDITORS SOUTHERN CULTIVATOR—As considerable interest has recently been excited in Europe in reference to the subject of Artificial Fish Breeding, and as some inquiries have been addressed to the Editors of our Southern Agricultural journals, and several applications been made to us, individually, in regard to artificial ponds for the breeding of fresh-water fish, we will, as far as we are able, comply with the wishes of our agricultural friends by giving a few hints on the general subject of Fish and Fish Breeding. Our views are principally the result of personal observation and experience, extending through a long course of years, on a subject which, although pursued in broken intervals of time, has greatly interested us. We premise by stating to our readers that we have neither time or space in this article to treat any part of this subject fully. We shall frequently only state our convictions, which, in our minds, are facts, without entering into any details of facts and arguments. To treat this subject fully would require volumes. A hint, however, thrown out at random awakens a train of thought in the reflecting mind, leading to farther observation and experiment, and often to beneficial results.

The seas and the rivers, as well as the earth and the air, are peopled with living things. All were created for the support and comfort of man, of whom God said: "Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air and over the cattle and over all the earth, and over every creeping thing that creepeth upon the earth." And now the first naturalist received his commission, more imposing than all the parchments issued by the most learned societies in the world, in these memorable words: "And out of the ground the Lord God formed every beast of the field, and every fowl of the air and brought them to ADAM to see what he would call them; and whatsoever ADAM called every living creature that was the name thereof." The office of the naturalist has, therefore, it must be conceded, claims to the highest antiquity and the sanction of the Supreme Ruler of the world.

Could we but dive into the waters and study the instincts and habits of fishes, and write their biographies as we do those of men, of quadrupeds and birds, we would find ourselves traversing a new world and be enabled to write a very interesting chapter on those now blank pages in the history of nature, which remain for future observing naturalists to fill up. When they do appear, the ever inquisitive mind of man will have opened to him a new fountain

of knowledge. There he will read of instincts and habits and passions, of conjugal attachments and parental protection, of the love and the hate—the sociality of some species and the ferocity and interminable warfare of other tribes; in a word, the world within the ocean and beneath the waters of the streams and the lakes, is peopled with races whose instincts lead them to engage in various pursuits, and where the ravenous fishes are designed like ravenous beasts and birds of prey; to check the too rapid multiplication of some species and preserve an equilibrium in this world of waters.

Among those appointed agents to control these masses that people the waters, is man himself. He is charged with a commission to study their names and habits, to appropriate them to his use, and by a law of nature he is permitted to derive the same pleasure in the pursuit that is derived from all other researches after knowledge.

It must be admitted that every effort that has a tendency to multiply and cheapen food and thus afford support to millions of our race, must secure the countenance and approbation of the philanthropist at all times. We are scarcely aware of the immense numbers of the human race that are supplied with cheap and wholesome food from the waters of the seas, the lakes, rivers and streams. The most important cities of the world are maritime. The sea, not only gives wings to commerce, but it furnishes us with the oil that feeds our lamps—the turtles and terrapins—the lobster, the crab, the prawn, the parent of the shrimp—and other crustaceæ—the oyster and other shell fish, and an endless variety of the finny tribes, which serve to cheapen our markets and afford wholesome food to the poor and delicacies to the rich. Very sad and distressing would be the condition of millions of the inhabitants of large maritime cities, if the waters should cease to yield up their treasures to the craving appetites of men.

Before we sat down to write a few thoughts on the subject of fishes and their propagation, we obtained the "Treatise on Artificial Fish Breeding, translated and Edited by W. H. FRY," published by APPLETON & Co., N. Y., under a hope that we possessed, in this work, all that was essential on this subject. It is a creditable translation of the reports on the subject, made to the French Academy and the French Government in favor of the two fishermen, GEHIN & REMY, who re-discovered this mode of artificial fish breeding—the particulars of the previous discovery as pursued in England, together with a translation of portions of JACOB's full and explicit Essay on the same subject, written nearly a century ago, are also given, to which are added several sensible papers extracted from BELL's Life in London, by two anonymous authors.

We find, however, that nearly the whole book, although the translations and selections are fair and creditable, is devoted to instructions in breeding a single species—the *Salmon*. It may, therefore, prove a valuable guide to the inhabitants in the vicinities of Northern rivers; but, as we fear, the salmon can never, even by artificial breeding, be introduced into our Southern waters, the work, except as a guide to the breeding of other species, will be of no particular benefit to us.

We may, perhaps, here be excused for offering a few brief allusions to some of the statements contained in that work. In a note to the preface, a slur is thrown on men of science, who are dubbed "Judges, Doctors, Professors."

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The obfuscated vanity of a few bewildered fogies who can there make speeches of which they know nothing, or read dull translations from the French or Dutch," &c. This might have been omitted without any injury to the sale of the book, as we will show presently. In another part of the work the Editor, GADENIER, in puffing the worthy French fishermen, says:—"The discovery of GEHIN &

REMY is a great fact for humanity parallel with the introduction into France of the potato," (p. 22.) Again:—"Forever will the discovery of GEMM & Remy be a fruitful fact for humanity, one of the greatest discoveries of ancient or modern times; a discovery which we place even above that of LEVERIER," &c., (p. 23.) This is rather extravagant praise. We are disposed to admit that the two fishermen had re-discovered a long known and long and successfully practiced series of facts, which without their knowledge, had been published in every minute detail, in four different languages, nearly a hundred years before—we are disposed also to admit that their plain statements of facts induced the French government to encourage the process of stocking their rivers with Salmon; we moreover acknowledge the justice and propriety of the reward bestowed on the fishermen, viz: an annual pension of 1,200 francs to REMY and 500 francs to GEMM, with 10 francs a day for travelling expenses and a tobacco factory to each. All this was generous and laudable, but the simpletons, both in France and New York, who sneered at men of science for their ignorance and "fogyism," in suffering the two illiterate fishermen to carry off the palm of what they term "one of the grandest discoveries of ancient or modern times," which "it took 6,000 years to find" ought to have known what the report of MILNE EDWARDS, will, at least in part, inform them, that the discovery had long been made by a man of science in Germany, after a long series of experiments, which eventuated in the most perfect success. Inasmuch as many of the details are contained in the work above referred to, we will only mention a few facts and refer to the dates.

JACOBI, an eminent German naturalist, after having been engaged thirty years in experiments on Artificial Fish Breeding communicated his discovery to FOUREROY in 1758. His communication was written in the German language. A Latin translation was furnished by Count de GOLDSTEIN. Its title was "An Essay on the Artificial Fecundation of Fishes Eggs, and on the Employment of the process of Stocking Rivers and Ponds." In 1763 full details were published in the *Journal de Hanover*. The whole process of JACOBI was carried on near Nortaleim, in the Kingdom of Hanover. He not only stocked the river with salmon by his artificial process, but rendered them an object of considerable commerce. England, in order to reward his services, granted him a pension. (See SOREE's *Helvetiennes*, Amsterdam, 1771, p. 169.) An abridged account was published at Berlin in 1764. The French version was published by order of the Academy of Sciences in France, in 1773.

The details of the process of JACOBI are as full, in every particular, as these now published in France as the results of the discoveries of REMY & GEMM. This is now fully admitted by the scientific men of France; indeed, they have re-published JACOBI's experiments, and the essential points are faithfully given in the little work before us, as translated by M. COSTE, (pp. 29—40.)

But this is not all. England is ahead of France in this whole matter of artificial fish breeding. YARRALL's admirable work, in 2 volumes, on the History of the British Fishes, was published in London in 1836. In his Preface (vol. 1st, p. 24) he refers to the Essay of Dr. WALKER, of Edinburgh, on the Natural History of the Salmon, who had quoted the experiments of JACOBI, and had found that "this artificial fecundation can be accomplished with the roe and melt of fishes which have been dead two and even three days." In 1836, SHAW commenced his experiments on artificial Salmon breeding in Great Britain after the process described by JACOBI, and was perfectly successful. In 1838 we happened to be in London and attended the meetings of the Zoological Society, of which we were a corresponding member. The whole subject which had awakened interest in consequence of the decline of

salmon in most of their rivers, was there discussed and regularly published in their proceedings. The whole process of artificial fish breeding was fully understood and familiarly spoken of as facts well known to men of science and successfully practiced, not only in Hanover, but in Great Britain. Our own experiments on other species in America excited no surprise. The simple knowledge of the fact, that the eggs of the fish become fertilized by the effusion of the milky substance of the male, which may be seen in clear water any day in spring, on the breeding places of our perch and other species, will lead to all the results that have followed. The mode pursued by JACOBI, by the English naturalists, and the French fishermen, were precisely the same. A male and a female salmon were taken whilst the latter was in the act of spawning. The roe was, by a pressure on the abdomen, expelled from the female and the milky substance, called melt, from the male in the same manner. These eggs, now impregnated by this artificial process, were carried to a pool or basin, where, in the course of from 50 to 110 days, the young fry appeared. The eggs of fishes may be assimilated to the seeds of plants and may, therefore, be transported to long distances. If placed in their natural element, under favorable circumstances, they will produce young, as the seeds of a plant will germinate and grow. Mr. GEMM only commenced his investigations in 1842, and it was not until 1848 that the Academy of Science was apprised of the claims of the fishermen of Bresse. Long before that, the scientific men of England had been stocking their rivers with Salmon and Salmon Trout. Mr. BOCCUS, in 1841, introduced, by this process, 120,000 into the streams near Uxbridge, and on the following year 2,000,000 of Trout in the streams in the county of Hertford, and published a book on his method of stocking streams.

Thus, it appears that the diminution of Salmon from year to year in the waters of England and France awakened a desire to restore this constantly increasing loss. England sought to do this by the lights which the science of Germany had afforded and placed, in full detail, into her hands. The French fishermen, we charitably believe, re-discovered it by the study of simple nature, to which the philosopher, as well as the peasant, must resort in the investigation of truth; as far as this, they also were men of science. France would have obtained her information in a few months without the aid of the fishermen, and it is very surprising that, if they had forgotten what their learned Academy had published, in regard to this discovery in Germany, they should so long have been ignorant of the published account of what had been done and was doing across the channel. The discovery of JACOBI has, no doubt, been reproduced in many instances in every country without the slightest knowledge of JACOBI or his writings. Whilst, therefore, we award due praise to the fishermen, let us not be unmindful of the previous labors of the scientific men of Germany and England.

The next important inquiry that presents itself, is, how far can this method of artificial fish breeding be applied to those fishes of the seas, that are articles of commerce, in the capturing of which thousands of hardy seamen are employed, and whose exposed and often perilous labors, supply food for millions of our race?

A mere glance at the habits of these species of fish will convince us that, with a very few exceptions, no great advantage can be derived from this discovery in the breeding and transplanting of the finny tribes. They, in their production, must be left to the operation of Nature's own laws, and the fishermen must pursue and capture them on their own watery domains. We confess, however, that we would be pleased to hear of experiments made to introduce into the waters of our Southern sea coast the spawn of the Turbot and the Sole from English seas, and a few superior fishes from the Mediterranean coast. The fishes

on the European seas have their representatives of the same genus along our own coast, and, in many instances, are identical on both sides of the Atlantic. The American Continent is colder than Europe under the same latitude; there is a difference of from ten to twelve degrees; we are not, therefore, to be governed in comparing the two continents by parallels of latitude but by the temperature. Massachusetts possesses the temperature of that of Denmark; Washington, that of Bordeaux; and the Carolinas, that of Lisbon, Madrid, &c. The fishes of commerce are about equally distributed in the seas of both continents; according to the above temperatures. On the coast of Great Britain and the North of Europe the principal species of the fisheries are the Herring (*Clupea herangus*), the Mackerel (*Scomber vulgaris*), the Shad (*Alosa finta* and *Alosa communis*), the Mullet (*Mugil capito*), the Sole (*Solea vulgaris*), the Turbot (*Rhombus maximus*), the Lamprey (*Petromyzo marinus*), the Halibut (*Hippoglossus vulgaris*), the Haddock (*Morhua aglefinus*), the Pilchard (*Clupea pilchardus*) a small species of Herring—usually about 7 inches in length. It requires from 2,500 to 3,000 grown fish to fill a hoghead. YARRELL mentions (vol. 2nd. p. 106) that in one case 2,200 hogheads were captured in one haul of their immense sea seines, and BORLASE records another instance where 3,000 hogheads were taken. The Sturgeon *Acipenser sturio*). The roe of this fish is greatly sought after by the Italians. The Caviar or Kavia is prepared from it. It is used as butter in Muscovy and Holland. The greatest Sturgeon fishery in the world is in the mouth of the Volga, in the Caspian Sea. The Salmon (*Salmo salar*), the Salmon Trout (*Salmo trutta*); to this might be added the Flounder (*Platessa flesus*), and Plaice (*Platessa vulgaris*), and a few others. It should be observed that there are several species in each of the several genera to which these species belong. Nearly all of these fish, with the exception of the Salmon and the Trout, deposit their spawn in the waters (more or less deep) of the ocean. They are furnished with a great abundance of eggs, which require no protection from man. BLACK counted five hundred and forty thousand ova in a female Mackerel. The numbers in these several species although they have declined in some years, and on some of the fishing grounds, have increased in others. The products of the ocean appear inexhaustible, and their multiplication is not dependent on the artificial aid of man.

It is far different, however, with the Salmon and the Salmon Trout. These ascend rivers for the purpose of spawning, and, being valuable fishes, their numbers were reduced by the cupidity of man, and now, by artificial means, they are re-stocking their rivers, which, we believe, will result in success.

Let us now come nearer home and take a passing glance at our own fisheries and fish on this side of the Atlantic. From the United States census we learn that our country employs 9,025 men engaged in the fisheries, and that in addition to the immense consumption in America, our exports in fish for 10 years down to 1853, amounted to \$7,002,227.

We have, in America, the Herring, the Mackerel, the Cod, the Haddock, the Shad, and, indeed, are represented, although in different species, by all the genera that constitute the fishes of commerce in Europe. Their Salmon are more abundant than ours. Our Shad are infinitely finer and more plentiful than theirs—in Mackerel and Herrings, the two countries are about equal. Our Cod are more abundant. Of the flat fish—or Plaice family—their Turbot and Sole are superior to ours. The Halibut is the same species along the shore of both continents.

The Salmon in our country is identical with that of Europe. It does not exist South of the Connecticut river (lat. 41 $\frac{1}{2}$ °), and we doubt whether it ever was found in

any quantity in the Hudson. There were no obstructions in the river and no steamboats to disturb the waters fifty years ago, and we never saw or heard of the Salmon, and we have only an account of one or two that have since been captured. The European rivers that abound in Salmon are short and their waters are fresh to the ocean, admitting the Salmon to find a ready access. The Hudson is salt for a hundred miles from the ocean and the tide rises for 150 miles. From this cause, or from its being already too far to the South, Salmon are not found in its waters. In the Connecticut River, the Salmon is becoming scarcer every year, in consequence of the erection of weirs and mill-dams and other obstacles to its ascent in the spawning season; and the New York market is supplied with Salmon principally from the Kenebec River, in Maine. Salmon spawn might easily be transported from the Kenebec River to the upper waters of the Hudson. The possibility of success is at least deserving of a fair trial. With a little attention and judicious laws, rigidly enforced, the Connecticut River could be made to yield a great abundance of Salmon.

The American Shad (*Alosa sapidissima*) is the most valuable of our spring fishes in America. It enters our rivers from Alabama to Maine. We believe that the Shad return to the several rivers where they were spawned. Although it is the same species along our whole Atlantic coast, yet each river seems to have its variety, so that our fishermen speak confidently of being able to point out those from the Edisto and those of the Savannah Rivers, those of the Delaware and those that come from the Schuylkill. We believe that the Shad do not cross the Gulf Stream, which is avoided by all but cosmopolite or tropical fishes—that they do not migrate far along our coast, and that they remain in the ocean contiguous to their several rivers, which latter they ascend for the purpose of spawning. Neither do we believe that the account of Herring, represented by PENNANT, ANDERSON and the early writers as taking up their winter quarters in the Arctic Circle, then making their way first to the Shetland Islands and from thence along the coasts of Europe and America is entitled to any credit, for the following reasons:

- 1st. None of our voyagers could find the Herring in the Arctic seas.
- 2nd. There is no fishery for them either in Iceland or Greenland.
- 3rd. They are found in deep water, at all seasons, along the coasts of Europe and America.
- 4th. The Herrings are nearly all of different species along the opposite coasts.
- 5th. Instead of coming from the North, both the Herring and the Shad enter Southern rivers long before they are heard of farther to the North. The Shad appears in our markets, in Georgia and Carolina, in January and February; in New York on the beginning of April, and in Massachusetts in May.

We perceive that, by a Bill introduced into the New York Senate, every fisherman is required to impregnate the spawn of two dozen female fish with the milt of the same number of males, toward the close of the fishing season, and plant the same on his fishing ground in the presence of a Justice of the Peace. As this applies principally to the Shad, they seemed to have overlooked one material fact in Natural History. This species spawns exclusively in fresh water. The Shad that supply the New York markets are at present principally taken in gill nets that stud the shallows and bars of the Hudson for a hundred miles. Here the water is salt. The ova would not be sufficiently matured and the whole labor of planting them would be a dead loss. If these legislators had gone higher up the river and looked out for the spawning grounds of their daily diminishing Shad, they would have

been enabled to discover the cause and enact wiser laws for the prevention of the growing evil. Fifty years ago, these fine fish were caught with the seine by thousands, four or five miles above Waterford, the head of navigation. We frequently saw them sold at one dollar per hundred. Their spawning grounds were at the feet of the various falls of the large streams that constituted the sources of the river. We several times witnessed the process of spawning at the foot of the Hoosac Falls. The Shad had crowded together to the number of many thousands in an immense basin whose waters were in some places twenty feet deep, where the sides of the rocks were covered with foam and the atmosphere was filled with the spray of the rushing torrent. The waters seemed swelling with the constant wheeling and turning of these fishes. They slapped the water with their tails and appeared, by violent muscular actions, to be engaged in disincumbering themselves of their spawn. They were so much occupied in their own work that they were regardless of the presence of man, and ran heedlessly into scoop nets which secured them at the rate of an hundred in an hour. Men standing on the rocks were securing them with their spears, and an Indian boy was shooting his barbed arrow at random into the water and brought them out with a line which was attached to the arrow. Thus, whilst the work of multiplication was progressing that of destruction was not idle. A few weeks afterwards, thousands of these fishes might be seen floating down the river, some dead and others with attenuated bodies and disproportioned heads, ready to die, from the exhausting process of spawning.

A writer in the *New York Times* says, "whereas it used to be a common thing to draw 1600 Shad at a haul, the fisherman now gets sometimes one or two fish in his net." No wonder! They have shut out the Shad from their breeding places above. Where no spawn is deposited there can be no fish. The dam below Waterford was thrown across the river and a miserably constructed apron was erected where the fish were to ascend. The inventors of this contrivance seemed to think that the Shad would mount a water-fall as the Salmon leaps up a cataract. The Shad is now no longer sought after above the dams and other obstructions to ascent, and is accordingly diminishing in the river below.

The fact that the Perch and other fishes are diminishing in the same proportion in that, now, great river of steamboats and commerce, the Hudson, may, we think, be easily accounted for. Their spawning beds are situated on the long line of shallows, called "flats," that exist, a little removed from the channel, between Dutchess county and Albany. There, in their quiet waters, covered with the broad leaves of floating plants, they, in the peaceful days of the Knickerbockers, multiplied unmolested. If we now take our stand on the shore we will hear the puff of one steamer after another hurrying past each other in every direction. The boat passes and is nearly out of sight when the water becomes agitated at your feet and wave after wave, that had been lifted up by the paddles of the steamer, comes bounding on the shores, disturbing the beds and covering up with the mud of a constantly agitated river, the spawn of the Perch.

In our Southern States the fishes that run from the sea to the rivers for the purpose of spawning are not numerous. The Shad, the Rock fish, called the Striped Bass at the North, (*Labrax lineatus*), and the Sturgeon (*Acipenser*) are the principal ones. Our Southern Sea Bass (*Corvina ocellata*), a highly esteemed fish, is found ascending our rivers, not only in brackish, but oftentimes in fresh waters. We have, in the waters of our Southern seaboard, an abundance of fine fish, but we have not a sufficient number of fishermen, nor do they possess all the improvements in nets, or the skill of European fishermen. We have no space to enumerate the species; they would

afford a large catalogue. Among the best are the Crevalle (*Batholeneus pampinus*). Two species of Whiting (*Umbra littoralis et Calburnus*). We recollect having been invited by a friend in New York to accompany him to one of their famous restaurants, to join him in a plate of the most delicious fish that came to their markets, called, by way of distinction, the King fish. He proved himself an epicure. It was, however, our Carolina Whiting. The Drum (*Pogonias cromis*). The Sheep-head (*Sargus ovis*). The Sailors' Choice (*Labrax fuscus*). The Croaker (*Micropogon undulatus*). The Yellow Tail (*Meropion exanthemus*). The Black Fish; Sea Bass; Rock Fish; the Mullet, and many others: some fine flavored fishes are also brought to us alive from the Florida coast.

Having given a glance at the salt water fishes, let us now direct our attention to those that may, with a great probability of success, be multiplied in a fresh water fish-pond. We will here enter a little into a detail of our personal experience—our disappointments, with some and our success with other species—in order that others may guard against our mistakes and consequent disappointments, and improve on and profit by our successes.

In 1804, whilst yet a school boy, we applied to and obtained the ready consent of an indulgent father to construct a fish-pond agreeable to our own imperfect notions on this subject. The locality was ten miles above Troy, N. Y., and within two and a half miles of the Hudson River. We had two objects in view. One, which appeared quite reasonable, was that of having always at hand a supply of fresh fish for the table; the other, and which we did not much speak of, was an irrepressible desire to study the habits of the funny tribes. We were not then aware that any book had been written on fishes. A never failing brook ran near our residence, the waters of which had been appropriated to no other purpose than that of sometimes turning a grind-stone. It was a clear stream, but less cold than other streams in the neighborhood, which contained the Brook, or Speckled Trout. By the aid of two of our father's negroes, a dam was thrown across the valley of about forty yards in extent. It was at first constructed with the cheapest materials—slabs and a broad bank of earth. We candidly admit that we can give no instructions in the mysteries of dam building. Suffice it to say, it was the most perplexing job we ever undertook. The slightest crevice in the bank, no larger than a goose quill, would, in a night, increase to the thickness of an arm, and presently our rushed the water through a ready made sluice of the size of a hoghead. Patience, however, and a little more experience, finally surmounted every difficulty, and our dam never gave us much trouble afterwards. The water, in a few weeks, filled the pond to overflowing. It was seven or eight feet deep in the channel, gradually shallowing to the shores, and covered about three acres. The sluice way, or mouth of the dam, through which the waters escaped, was near the surface, with a gate 8 feet wide, with brass wires, perpendicularly inserted, 4 to the inch. The sides and upper end of the pond were planted with water grasses—Arrow Heads (*Lagut-arca*), the Yellow Water Lilly (*Nuphar katmiana*), and other aquatic plants, such as grew in the neighboring mill ponds. At long intervals during that and the following year, as the laborers found leisure time, a broad bank was thrown up on the sides, planted with willows and other trees, affording a shade for the fish, a quiet retreat for the student and a pleasant green bank for the seat of the angler. Two pair of domesticated Summer Ducks and a pair of Canada Geese, the outer joint of the wing of each having been removed, were the only birds allowed to navigate the waters.

We now commenced stocking our pond with the materials that were within reach. Our first effort was quite successful. The waters of a mill-pond, a couple of miles

distant, were about to be let off for the purpose of repairing the race-way; of this the proprietor gave us notice. The fish, after the main body of water had run off, were congregated in shallow holes and were taken by hundreds in scoop nets. They were composed of Cat Fish, Eels, the Mud Sucker and a variety of smaller species that go under the name of Chubs, Shiners, Mud-Fish, &c. A long wagon, containing four barrels placed upright with the upper end open and nearly filled with water, was the vehicle of transportation. The fish were placed in these barrels as soon as taken from the pond. In the course of a day, several trips of the wagon carried a much greater quantity of fish than was necessary to stock half a dozen ponds. We had now an abundance of fish, as a few only of the smaller ones had perished—it being a cool day. But, unfortunately, they were not the fish we prized, or whose habits we particularly desired to study. We longed for larger game and better fish. Our next resort was to the Hudson River. By offering a man who was in the habit of setting what is called a dyke net, his market price, which was a mere trifle, we induced him to preserve all the fish he caught and keep them in a large floating car to await our sending for them. Through this means, we procured large numbers of the fish we wanted, such as the Yellow Perch, our greatest favorite; the White Perch; the Pond Perch or Sun-Fish; the large River Sucker and several smaller species that are classed among the Chub, Dace, Roach, &c. These hardy fish we found no farther trouble in conveying over a stumpy road than that of removing a few bucketsful of water at the various brooks that crossed the road and replenishing the barrels with fresh water. From two brooks that ran through the woods not a mile distant, we obtained a number of Brook Trout, about 30 of which were placed (alive) in the pond. Later in the season we made two attempts at obtaining the Shad and one with the Herring. These proved failures. Notwithstanding all our efforts in taking them from the seine, and placing them carefully in the hoghead filled with water, they all died in a few minutes. If we had then known what we discovered by accident a few weeks afterwards, we might have tried a more successful experiment with the eggs. They, however, were probably not yet sufficiently matured, nor do we now believe that either the Herring or the Shad will ever become naturalized to, or breed in, fresh water ponds.

[Concluded in our January number.]

THE COST OF RAISING COTTON.

Messrs. Editor:—Knowing, from the regular perusal of your paper, that you do not desire to circulate erroneous information, I take the liberty of correcting a very incorrect statement which appeared in your tri-weekly issue of the 28th ultimo, in a communication headed "The Gulf States of our Union and the Valley of the Mississippi." The misstatement, doubtless an unintentional one, occurs in the following paragraph:

"The cost of raising cotton is four cents a pound; one bale of five hundred pounds to the acre is considered a fair crop. A twenty acre field yielding twenty bales, or ten thousand pounds, at eight cents a pound, only yields a profit of four hundred dollars."

The true state of the case can best be reached by taking the case of an improved plantation of the most available size and with a proper number of slaves upon it, and making the estimates from that basis. This is a most favorable way of making the estimate to exhibit the largest profit; for it is well known to every experienced planter—and how dearly some have purchased their experience!—that the expenses incident to the opening and improving of a plantation for several years after the undertaking is begun, eat up all the profits and often leave a load of debt behind, sometimes forcing a sale of the whole proper-

ty, which thus leaves the hands of the original proprietor to fall into those of some wiser man who has eschewed the toil and hazard of opening a new place.

A plantation of sixteen hundred acres, one thousand of which is cleared land, and has the necessary cabins and other buildings necessary for carrying on a place of that size, is worth from forty to sixty dollars per acre, according to locality. Estimating its value at the lowest rate, say \$10 per acre, and it makes \$64,000. To work this place to advantage—that is, to cultivate seven hundred and fifty acres in cotton and two hundred and fifty in corn, peas, potatoes, &c.—will require a force of 75 effective hands, which, with the young and old, who do not go to the field or work, who would ordinarily be entitled to the 75 hands, would constitute about 130 or 140 slaves on the place, who, at an average \$600 a piece, would be worth about \$75,000; 50 mules worth \$130 each, would make \$6,500 more; 100 head of cattle may be estimated at \$1,200; 300 hogs may be estimated at \$700; 12 yoke of oxen at \$600; wagons, farming utensils, furniture, blacksmith and carpenter's tools, and all the other necessities, including gin-stands, mill, &c., may be estimated (and it is an under estimate) at \$2,000; so that any one, by simply adding these different amounts, will see that the entire value of such a place as I have supposed will be about \$150,000; and this upon the supposition that the place is worked without a steam engine to gin the cotton with.

Such a place, with favorable seasons, will make ten bales to the hand, or about one bale to the acre, and sometimes when everything is prosperous, an early spring and a late dry fall, as many as twelve bales to the hand, and in some very extraordinary instances even as high as fifteen bales have been gathered. But on an average of ten seasons every experienced planter will agree that eight bales to the hand is an outside estimate, making a crop of about six hundred bales; and taking 8 cents as the average price per pound, which for swamp cotton is again a full estimate, and the gross income for a single bale of 400 pounds, which is the well-known uniform weight, will be \$32, and the whole crop \$19,200, exclusive of the cost of shipping, and soiling the crop, which amounts to at least \$2 50 per bale in every case, and where the place is distant from market nearer twice that; leaving say a nett income of about \$18,000. From this must now be deducted the cost of cultivating the place, overseer's wages, feeding, clothing, and doctoring the negroes, supplying wear and tear of tools, and losses of mules and stock, altogether, on a place of the size I have named, not falling short of \$6,000, many planters estimating their expenses at \$100 to the hand, which would make \$7,500. Taking it at the former sum and we have the nett profits of such a place as I have described amount to \$12,000, being just about an interest of 8 per cent. on the value of the capital invested.

This, Messrs. Editors, I believe a fair statement of the profits of the cotton planter; and you can now see how it comports with the fancy sketch of your correspondent. If I have exaggerated at all it has been in giving too favorable an aspect to the side of

A PLANTER.

[National Intelligencer.]

Vicksburg, July, 1855.

SULPHUR.—Sulphur is a good aperient for sheep, in doses of one or two ounces. It is more valuable, however, as keeping the bowels in a relaxed state when they have been opened by other medicines. It is the basis of every ointment for the cure of mange, and is useful in the common scab. It enters also into the composition of the best alterative powders.—Randall.

PLOWING IN TIME OF DROUTH PHILOSOPHICALLY CONSIDERED.

EDITORS SOUTHERN CULTIVATOR—In your number of June last, I had an article under the above title. It was followed by some editorial remarks, which represented my theory as "directly at variance with the practice and teachings of our most distinguished agriculturists: nearly all of whom contend that the oftener the earth is stirred, and the more finely its parts are pulverized in dry weather, the greater the amount of moisture it will attract from the atmosphere." My great respect for the source from which the above stricture emanated, deterred me from any further remarks on this subject, until I should have gone through a series of experiments, for the sole purpose of either establishing or overthrowing my theory. Experienced agriculturists encouraged me. An extensive planter remarked that if he had all the corn that had been lost by too much plowing* he would not have to plant another grain.

But I proceed to the detail of my experiments. These were in progress when a correspondent in your August number suggested some experiments, which were open to several objections that would, in nine cases out of ten, lead to fallacies; *e. g.*, pouring equal quantities of water over boxes filled to the depth of six inches with earth. As I took every precaution and used all carefulness in the whole of my experiments, I cannot conceive how there could have been any error. A friend was interested in what was going on, and he was a constant observer. In order, however, that your readers may have the means of judging upon the liabilities to error, and by way of eliciting any suggestions to those who may feel disposed to repeat my experiments, I give them with rather a tedious particularity.

The balance being of the first importance, I must describe the one which I constructed and used. I procured a piece of well seasoned wood, 26 inches long, 2 inches wide and 1 inch thick. Through the middle of it, in the direction of its thickness, I bored a hole large enough to admit the point of a compass-saw. Introducing the saw, I made a slit transversely to the depth of about a half inch. Then, withdrawing it, I introduced it again with the edges reversed, and sawed as before. By this means I had an opening, into which I next drove the blade of a stout carving knife, deprived of its handle, and having a fine straight edge of steel. It was a blade of such thickness that there was no elasticity between the parts of it, on which it was to rest. At equal distances from this blade, towards the end of my beam, I attached appropriate hooks with perfect freedom of motion on fixed points. At right angles to a line passing through these points, I set up an index whose point was vertical to the knife-edge, when the beam was in place and horizontal. My knife-edge was next made to rest on two flat smooth steel surfaces made stationary in a horizontal position. And in a vertical direction, behind the beam when in its place, was secured a piece on which a vertical line was drawn from that point of the steel face on which one end of the knife-blade rested. This balance far exceeded my expectations. I could get no other of equal delicacy on which I could suspend so great a weight as I wished to operate with. When loaded with seven pounds on each end of the beam, it turned with one grain.

*NOTE BY THE EDITORS.—We never advocated the use of the *plow* as the best system of after-culture. Our plan is, to *plow deep* before planting, and afterwards *keep the surface open and mellow by shallow culture* with the cultivator or horse-hoe.

Experiment 1st.—I suspended from each end of the beam tin buckets 7 inches deep, 5 inches in diameter, and counterpoised them. I then took them to the spot from which I meant to procure the earth. The earth was in just such a state of moisture as we consider favorable for sowing small seeds. I removed about 3 inches depth of earth, and then began to fill the vessels, which I did by taking it all from one hole, and putting it into the buckets—about a half trowelful alternately into each, until they were nearly filled. I subsequently reduced the quantity in each to 7 pounds. My comparisons were to be direct, *i. e.*, between the buckets (along with their contents) without the intervention of weights, which from this time, through all the experiments, were employed only to restore the equilibrium whenever disturbed. The buckets were, therefore, kept suspended on the beam. The whole was placed in a situation exposed to the sun and air and dews. At the time of counterpoising the portions of earth I put into each bucket an iron stirrer. These were simply two large nails selected with reference to equality of weight. The stirrers were always left in the buckets, so as to guard against the removal of the smallest portion of earth. The buckets were left in one condition (neither being disturbed) for twenty-four hours. At the end of that time they were still in equilibrium. Being thus satisfied of the similarity of circumstances, I commenced stirring (plowing) the earth in *one* of them. The atmosphere was very humid; and the portions of earth (balance stand, &c.) were frequently taken in, to avoid the rain falling into them. *While this moist condition of the atmosphere lasted, the stirred earth gained daily in weight.* But a change came on almost imperceptibly, as the atmosphere became drier; and, on the fourth day, the gain was lost again, and the equilibrium restored. I continued to stir the same portion until it was a *decided loser*, the sun being bright in the day and the dews heavy at night. There was one morning, after a very heavy dew, when the gain was so perceptible that I found by restoring the equilibrium, that it was five grains. And this was not equal to half the loss of the day before. Several times during all the experiments, there was no perceptible difference between the indications in the morning and those in the evening.

Experiment 2d.—I stirred the other bucket (now the heavier) leaving the first undisturbed. *It lost very rapidly. It became the lighter one in the course of the day.*

Conclusion from these experiments: When the atmosphere is in a certain state of humidity, the pulverized earth absorbs moisture. When the atmosphere reaches a certain state of dryness, the stirred earth gives off its moisture. I think my experiments, with their variations, do most clearly establish as a fact, that the atmosphere does reach such a state of dryness that the plowing of the ground may cause it to lose more moisture than it gains. And my observation of the weather during my experiments satisfies me that this state of the atmosphere is by no means unusual.

But there is something else that is not taken into account in the above experiments. And it might be supposed that if its influence had been in play, it would have so changed the results that the very contrary conclusions might have been established. I mean capillary attraction. Your correspondent, "P," in the August number, refers to this. The next experiment was designed to meet this contingency.

Experiment 3d.—I perforated the bottom of each bucket with a hole $\frac{3}{4}$ of an inch in diameter. Through these holes I passed equal quantities of lamp wick, taken from the same ball, and so arranged, in the doubling and redoubling, that the portions, when formed, were composed of no two pieces that were consecutive in the spinning. This I conceived gave me every chance for having the portions for the two buckets, of equal tightness. They

were of equal length. I passed 4 inches of their length up into the buckets while empty, leaving 2 inches out below. I then made a little stand with 4 legs 2 inches long, which, with the thickness of the piece, came to nearly 3 inches. Two large holes were cut through this little stand. The stand was then placed into a large tub and leveled by a spirit-level. This was done by adjusting the tub itself, with the stand in it holding the level. It is evident that, in this connection, when water was poured into the tub its surface would continue parallel with the top of the stand. The water was poured in until it nearly reached the lower side of the stand. The buckets, previously prepared with earth and counterpoised as for the other experiments, were now set upon the stand, the wicks passing freely through the holes in the stand down into the water. There they remained 24 hours (neither of them stirred). At the end of that time they were taken back to the balance, and found still to be in equilibrium. They were then returned to the stand in the water, and one was stirred frequently during 48 hours. At the end of that time they were hung on the beam. *The stirred portion required 178 grains to restore the equilibrium.*

Experiment 4th.—The equilibrium being restored by the addition of weights, the buckets were placed again on the stand and the other bucket was stirred, leaving the former undisturbed for 48 hours. *The stirred portion required 140 grains to restore the equilibrium.* The atmosphere was dry during both these last experiments.

I further conclude, then, that even with the aid of capillary attraction, the loss of moisture by plowing in a dry state of the atmosphere is more than the gain.

As to what "P." says about the increased porosity giving greater capillary attraction, I think he has only to remember that he speaks of my crust as *not* being impervious to moisture, and then to connect with this fact, the established fact that capillary attraction is exercised to a greater degree through many small tubes than through a few large ones. My *pervious* crust approaches a series of small tubes. This loose, pulverized, soil resembles a series of larger tubes.

I had an opportunity, during the above experiments, of making an observation in another quarter, which I found to be of use in its bearing on the subject of inquiry. I had a little work, in the way of grading, going on, and one morning I observed that a portion of the earth that had been broken up the day before was as moist as if it had been exposed to mist, while other portions, also worked the day before, were not more moist, to appearance, than the earth that had not been dug—by no means damp. In reflecting on this fact I called to mind that the damp portions had been spaded quite late in the evening; and the other portions were those that had been worked through the day. I thought the inference to be warranted, that the earth which was turned over in the latter part of the day had not become so heated as to expel its own moisture; but, on the contrary, was so reduced in temperature as to condense the vapor of the air, and thus to form dew. And from this it would appear that the stirring of the earth in dry weather, would be less liable to render the earth drier, if it could be done in the latter part of the day.

I believe if my experiments should be repeated by a sufficient number of persons, with the care I used, there could remain no doubt in regard to the correctness of my theory, as advanced in your number of June. Will not others take interest enough in the matter to make some trials? J.

Alabama, August, 1855.

REMARKS.—We are thankful to "J." for this very interesting detail of his important experiments, and hope others equally qualified will pursue the investigation of the subject still farther.—E

RURAL METEOROLOGY—"SUN DRAWING WATER."

EDITORS SOUTHERN CULTIVATOR—Observing, one afternoon, the peculiar appearance of the sun's rays, that are commonly regarded as the "sun drawing up water." I pointed it out to Mr. BROWN, and asked if he believed it, as people commonly did? "Certainly," was his plump reply, with a challenging "Don't you?" In vain did I advance scientific doubts—that it was reflection of light, &c. Mr. BROWN impatiently interrupted me with, "why, look in the road here, captain, at these little frogs jumping about; they fell only early this morning in the rain. Why, a big rain caught me once in my swamp-field and I ran under a big beech tree to get out of it, when, a-vip, came a terrapin, right out of the heavens, as big as my hand, and sunk half of himself in the mud, not five feet from me." "But," I suggested, "don't you think these frogs, if they do fall with the rain, are probably taken up by a strong wind—a whirl-wind perhaps—and raised a little while and then dropped?" "That may be, captain," said Mr. BROWN, "and, if it wasn't for what I've seen and heard about this thing, I might be inclined to believe it. Once I was coming over the Ferry and the sun commenced drawing rain from right around us. I tell you it was a hard matter getting along. I just mashed my hat over my ears and caught hold of the bottom of my buggy with one hand and the middle long bar of the flat with the other. The water rose as thick as the thickest rain you ever saw, and we couldn't see the other side of the river. But the flat hands, they were used to such things, and, after taking off their shoes, so that their feet might fit closer to the boat, they just pushed right through as hard as they could. But BILL DICKENS says that he was once fishing at Gray's Landing when the sun commenced drawing up water all 'round him. He waited a while, when he got uneasy and paddled off as hard as he could, for shore. He found it mighty hard pulling; it seemed like it wanted to take him, boat and all. He had just got to the bushes when it took his hat, any how, and he was so scared he never thought to look up to see it sailing to the skies. When he got safe on land he looked up, but it had got hid in a great big cloud above." "Did he ever get it again?" was my inquiry, while Mr. B. took a long breath, anxious to know the upshot of the adventure. "Why, yes," was his reply. "He hadn't been on ground long before a rain came on, right where he was, and after it was over he thought he would see if it had fell, and, sure enough, as there hadn't been a bit of wind to carry it off, it had fell and lodged against some willow limbs in the river, not twenty yards below where it had rose from. Good evening, captain, I hope you may never be caught in the sun drawing up water," and Mr. BROWN rode away. FROG LEVEL.

A NOVEL OPERATION IN OBSTETRICS.

An esteemed correspondent at Philadelphia sends us the following rather singular statement:

EDITORS SOUTHERN CULTIVATOR—You may, perhaps think it worth a corner in your paper to publish the following singular statement which I received from "mine host," not long since, at a boarding-house in Philadelphia. He told me that while living in New Jersey he had a cow in the parturient state. Finding her natural powers unable to effect the last act of reproduction, several men went to her assistance, exercising the most forcible traction, but without success. Upon this he sent for Dr. C——, of Warren county, N. J., and requested him to perform the Cæsarian operation. The worthy doctor denounced all "cutting," but promised if the treatment was

left at his disposal, that he would relieve the patient safely. Upon this being acceded to, the doctor had the cow (on her side) lashed by the horns to a post and the men to exert themselves to hold her in a steady position, while he placed a noose around the head and shoulders of the calf, in *utero*, to which he attached a horse and with a whip started him. Heroic as this operation seemed, the cow, Mr. R. assured me, was safely delivered and recovered; but the calf was dead. S.

• POLAND OATS AND MEXICAN WILD POTATO.

EDITORS SOUTHERN CULTIVATOR—I herewith send you a sample of the celebrated "White Poland Oats." They are 25 per cent. heavier and ten (10) days earlier than any other variety with which I am acquainted; will yield about the same number of bushels per acre as the common sorts, and grow 6 to 8 inches taller in the same field and with the same culture.

The first grown in this State, to my knowledge, was from a small sample by mail, which a friend sent me from an Eastern State. They are now considerably sought after for seed, at from one to three dollars per bushel, and the demand never yet supplied. A majority of those offered and sold for seed are more or less mixed with other and inferior varieties by the inattention of farmers generally to the very important point of preserving seed of good grains and vegetables pure.

I have endeavored to keep them pure, having raised no other variety on the farm since I commenced with these, some six years ago. I shall be pleased to forward to any gentleman who wishes, any quantity by mail for the postage (6 cents per ounce). One pound of these oats will produce from 1 to 10 bushels, according to the manner of planting and cultivation. I raised a half a bushel from a half an ounce. One grain has been known to produce 2000 in one season.

For field culture one to one and a half bushels will seed an acre. Whereas the common varieties are usually sown at the rate of three to four bushels per acre.

I will, also, send, by mail, one or more tubers of the "Mexican Wild Potato," corresponding in weight with the amount of postage sent for the same, to any person desiring them.

This variety has lately been introduced into this country. The first product was not to exceed 3 inches in length and $\frac{3}{4}$ in diameter for the best specimens; but with each succeeding crop they have increased in size and length until we frequently find specimens 7 to 9 inches long, and the quality is much superior to any other now known. I herewith send two tubers. As to yield, they fully equal any other good Irish potato. From one potato of this variety I dug 121 $\frac{1}{2}$ pounds this fall.

Any person wishing to avail themselves of this opportunity to obtain the above seed, have only to enclose the amount they wish expended in postage on either or both of the varieties named, giving their post-office address and directing to

I. W. BRIGGS,
West Macedonia, Wayne Co., N. Y.

REMARKS.—This is a very fair offer. Mr. BRIGGS will do all he promises. His Oats and Potatoes are both very superior, and deserve a trial in *this* climate.—Eos.

HOGS ROOTING.—To prevent hogs from rooting, cut across the nose, just above the gristle of the snout, by which you will sever the nasal tendon, by which the operation is performed. Then split the gristle of the nose up and down the face, and the work is done. For the long-nosed, flap-eared breed, cut the nose off eighteen inches above the snout.

WANT OF PRECISION CENSURED—SCIENCE IN AGRICULTURE, &C.

EDITORS SOUTHERN CULTIVATOR—I was struck by an article in your September number, signed "GREEN HORN." The writer certainly takes a common-sense view of the subject, and his humor trenches deep into an evil, which is general and highly perplexing. It is an evil not confined alone to the literature of Agriculture, but pervades also the books on Medicine, Farriery and almost all Sciences or Arts, where prescriptions or directions are given for the benefit of others. A venerable dame "cunning in simples," or even the family physician, when called in to a suffering infant, will prescribe "a little Paregoric, a little Dalby, or a little something else;" but how much is that "*little*?" The same little 10 drops of Paregoric that will relieve one infant, may seriously endanger the life of another. And thus it is from the saving of life down to the boiling of a pudding! A "little sugar," a "little flour," "as much spice as will give a *grateful* flavor," "boiled down to a *proper* consistency," "simmer from 5 to 15 minutes." These and the like *evanities* are sufficiently appalling to any aspirant after culinary honors. If, in the nature of things, we cannot be perfectly *mathematical* in the language of our directions, let us at least strive after perfection, and come as near the mark as possible.

In regard to what your facetious correspondent says, on the subject of introducing "Scientific highfalutin" in Agricultural works, I have thus much to remark: If Agriculture is a *science*, and a complex one, too, and if it embraces in its circle, Comparative Anatomy, Chemistry, Entomology, Botany, Meteorology, Mechanics, and almost all useful sciences known to men, how, I ask, can an agriculturist, at all imbued with the learning of his profession, refrain from writing scientific articles for the pages of an Agricultural journal? The Physician and the Lawyer never dream of writing any other than scientific articles for the columns of their respective journals, and shall the Agriculturist be denied the same liberty? It may be said that planters and farmers are not generally educated in science, and, therefore, communications intended for them should be couched in plain language. This is true, so far as it goes; but I hold it to be the *duty of every free white man in this country* to be acquainted (at least) with the elements of literature and science. It is a duty which he owes to himself and to his country, and no stone should be left unturned to acquire this education, especially in a Republic, where everything depends on the mental and moral culture of each individual, and in a profession like Agriculture, which embraces so much of science, and in which so much is *yet to be discovered by scientific research*.

Still, I say, should the farming public continue to remain in scientific ignorance, let those who are able amongst us write and continue to write *technical* articles, and if they are worth anything, they will soon enough be *translated* for the benefit of the public.

I would fain touch upon other topics, but "brevity is the soul of wit," and I, therefore, seal up; giving you these, my sentiments, for what they are worth.

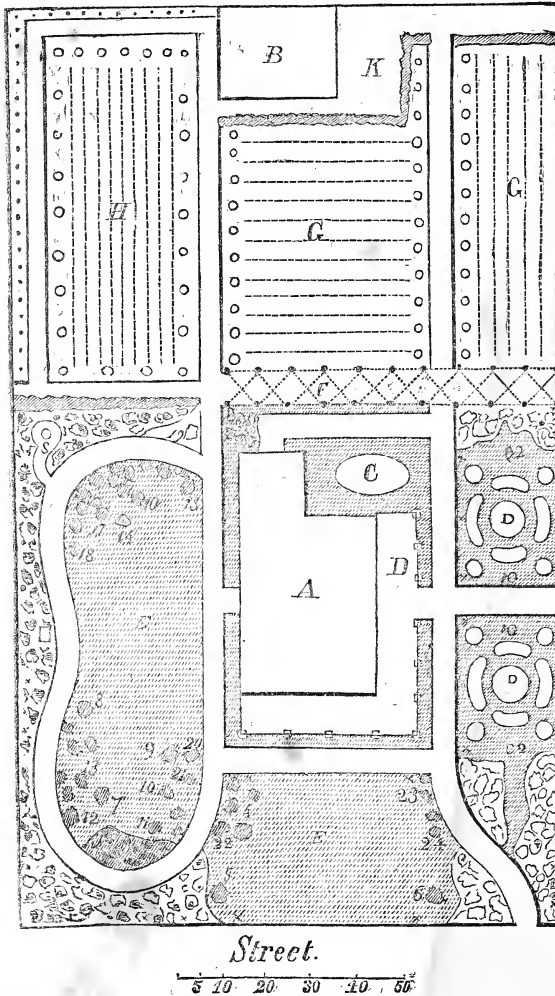
I am, gentlemen, your obedient servant,

J. ST. JULIAN GUERARD.

Bluffton, S. C., Sept., 1855.

DESIGN FOR IMPROVING COUNTRY RESIDENCES.

To lay out a rural residence satisfactorily, it is necessary to study the form and location of the ground, as well as to consult with, and ascertain the particular requirements of the family. It would be an easy matter to offer a series of designs, many of which might be useful to those in need. I conceive, however, that it will serve a more useful purpose to select, occasionally, sketches as they occur in practice, as many opportunities are presented of taking advantage of existing features and turning them to account in the general improvement. Individual taste must be recognised in the disposition of the various adjuncts to a dwelling. While some desire the purely ornamental character to predominate, others have more utilitarian objects in view. The most numerous class are those who wish to have a little of everything—vegetables, fruit, flowers and ornamental trees—as shown in the following design. It was required to arrange the ground, although limited in extent, so as to appropriate a small spot for flowers, as well as have a few of the most desirable ornamental trees disposed on the lawn with convenient walks for their inspection. Flowering shrubs had also to be kept in view; a small space was also desired for cultivating some of the smaller kinds of fruits; and, lastly, a portion had to be reserved for vegetable culture:



In arranging these various parts, the principle of *distinctness* has been kept prominently in view. On the west side, the short walk leading from the street to the principal entrance of the house leads through a small flower garden, consisting of a few simple figures geometrically arranged. The grape arbor forms a very appropriate division between the ornamental and vegetable ground, and its proximity to the house renders it useful and convenient as a shady resort in summer. The open space of grass forms a relieving contrast to the groups of trees and shrubs, and suggests a feeling of extent; a principle that is seldom adopted in small places, although it is most important; the same space of ground dotted over with plants would appear confused, monotonous and confined. The fruit garden, which is separated from the ornamental planting by an arbor vitæ hedge, is adapted for dwarf pear trees, strawberries and raspberries. The pears are arranged parallel to the walks, enclosing a space for strawberries. The raspberries are planted on a narrow border close to the fence. Dwarf apple and Pomegranate bushes are planted along the walks in the vegetable garden, the whole being excluded from the stable yard and road by an ever-green hedge.

REFERENCE TO PLAN.

A—House. B—Barn. C—Rose clumps. D—Central figures of flower garden. E—Lawn. F—Grape arbor. G—Vegetable grounds. H—Fruit department. K—Yard. L—Piazza. S—Rustic seat. V—Vase. The ground measures 120 feet by 200 feet.

The entire ground is level and elevated; in order, therefore, to improve the architectural appearance of the house, the first floor is elevated three feet six inches above the surface, and connected with it by a small turf terrace.

A few of the principal trees are named below, with reference to their location. Owing to the method I have adopted in indicating the position of the plants on the lawn, I could not conveniently refer them to numbers on so small a scale. They are selected chiefly in regard to color and diversity of foliage. Those nearest the walks are mostly

deciduous shrubs, planted sufficiently wide apart to allow full development. An annual pruning in of the strongest branches will improve their appearance when thus arranged, but not *clipped* into a formal shape. The masses of shrubbery shown by distinct outlines are thickly planted in the first instance, attention being given in the arrangement with a view to a gradual thinning out of the least desirable, as may be found necessary to allow space for the more select kinds. The line of shrubbery included between the walk and boundary north and east of the house is planted in like manner, with the addition of a few hemlock and Norway spruce firs and other small sized evergreens on purpose to shelter from cold winds.

The following named trees are placed as indicated by the figures on the plan: 1—*Magnolia purpurea*, Purple Magnolia 2—*Magnolia conspicua*, Chandelier Magnolia. 3—4—*Cedrus Deodar*, Deodar Cedar. 5—6—*Abies canadensis*, Hemlock Spruce. 7—*Liquidambar styraciflua*, Sweet Gum. 8—*Fagus sylvatica purpurea*, Purple Beech. 9—*Acer campestre*, English Maple. 10—*Chionanthus Virginica*, Virginia Fringe Tree. 11—*Magnolia tripetala*, Umbrella Magnolia. 12—*Rhus cotinus*, Mist Bush. 13—*Cytiscus laburnum*, Golden Chain. 14—*Virgileia lutea*

Yellow Wood. 15—Halesia tetraptera, Silver Bell 16—Larix Europea, European Larch. 17—Celtis occidentalis, Nettle Tree. 18—Acacia julibrissin, the Julibrissin Tree. 19—Juglans regia, Madeira Nut. 20—Berberis purpurea, Purple Berberry. 21—Pyrus Japonica, Japan Quince. 22—Buxus sempervirens arborea, Tree Box. 23—Euonymus Japonica, Evergreen Euonymus.

At D in the flower garden, a plant of the weeping cherry, and stars (*) shows the position of sugar maples for shade.

WILLIAM SAUNDERS,

Landscape Gardener, Germantown.

[Horticulturist.]

DRY ROT IN COTTON.

IF the Cotton Plant should suffer as much from premature decay in the course of a few years, as the Potato Plant has, the occurrence will not surprise us. Gangrene, whether "dry" or otherwise in vegetable and animal tissues, arises commonly, either from the weakening of vital force by improper nourishment, the presence of a poisonous substance, or from some unknown constitutional defect. The source of "anker,"—which attacks fruits and fruit trees, of the potato rot, and the rot in the seed and lint of Cotton is involved in great obscurity. Whatever may be the primary exciting cause, either of the premature extinction of life in the parts affected, and of their rapid dissolution, the warmth and humidity of the surrounding atmosphere may be such as to favor the destructive increase of the malady. All living beings are creatures of circumstances; with many of which the wisest are yet unacquainted. We know that inflamed flesh is apt to mortify; and that the dead limbs of a man like those of a tree, may even drop off by purely vital and chemical processes. Nature has many secrets in vegetable and animal life and death that human science may never penetrate, nor reveal. But this fact should not prevent our studying all the phenomena of vitality as displayed in cultivated plants and domesticated animals. English farmers find it impossible to grow common red clover on land where this plant has flourished for a half century, without being able to assign any good reason for the fact that the soil is now "clover sick." A change of crops, in all such cases, has been the best remedy, where others failed. The fastest horses, with the largest constitutional resources may be broken down by over work; and why may not the vital resources of the Cotton Plant be overtasked by those who seem willing to drive cotton culture as one drives a free horse till he falls dead and *rots*?

The over-feeding of an animal is a poor remedy for pushing him beyond his natural powers of endurance; and by a parity of reasoning, to surcharge the vessels and cells of a plant with liquid manure, is not a proper preventive of "rot" in its sound or diseased system. Potatoes rot most when thus treated.

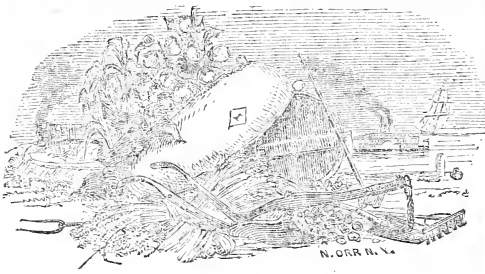
According to our ideas—diseases in vital organs and functions are seldom viewed so philosophically as the present advanced state of physiological science renders practicable. If we were to say that the earth and climates, including air and water, produce murrain in cattle far more in some localities than in others, as similar elements of disease produce bilious affections in the human family, the true sources of these well known maladies would be but poorly explained. Unquestionably, many causes often co-operate to weaken the vital principle in plants and animals; and the early death and dissolution of a single cell in the fruit of a cotton plant, are doubtless sufficient to bring on the chemical disorganization of the whole boll if not of the whole plant. The rotting, or decay of every tissue is purely a chemical process, however this disorganizing operation may have originated.

If we have read the agricultural literature of civilised

nations aright, such diseases as the blight on pear trees, the premature rotting of apples, potatoes, and other vegetables, and the rot in cotton, are not likely to diminish in the aggregate until farmers know more of the laws of nature, and of the true principles of farm economy, than they now do. They can not systematically obey laws of which they know little or nothing. So long as farmers in Western New York raised potatoes on fresh virgin soils, they were exempt from the potato rot as a prevailing distemper; and we fear that as cotton is cultivated year after year on the gradually deteriorated lands of the South, there is no strength of vitality in this weed to protect it, *indefinitely*, from constitutional deterioration, and its natural consequences.

In an excellent article on "Cotton culture and selection of Seed" in our last issue, Mr. A. W. WASHBURN, of Yazoo, Miss. says that his crop averages a bale of cotton of 400 lbs. to the acre, although he plants "on prairie land twenty-five years under hard cultivation, without manure." He makes ten bales to the bond; and probably is not at all injured by the rot. Such facts speak well for the natural resources of his soil; but "hard cultivation" for 25 or 30 years more without manure may so change the physical and chemical properties of this land as to weaken the cotton plants which grow therein; and their seed, planted in districts where the rot prevails will yield crops equally subject to the malady. If our cotton rotted, as described by "Beaver Bend" in our last number, we should grow, or obtain from another seed produced on fresh land to plant hereafter. The land on which cotton was to be cultivated should be plowed an inch or two deeper than usual to give the growing plants the benefit of a better pasture in *fresh earth*. The subsoil is often full of virgin, fertilising resources, which superficial, shallow tillage never reaches. There is a striking analogy between the healthy pasturage of domesticated plants and domesticated animals. If unchanged into new and fresh pastures, cattle soon eat down, and finally kill out, those nutritious grasses and herbs best adapted to form pure blood, sound flesh, nerves and bones. They may still subsist, and propagate their kind for several generations; but under far less favorable circumstances, and more subject to casualties. The overcropping of their land is a similar folly. It parts with some element of vegetable nutrition, unseen and unappreciated by the cultivator, and there is left to him a disordered soil yielding cotton plants of unnatural unsound growth, which Nature disowns. Vitality deserts, and Chemical Laws speedily resolve into their original elements. As every thing that lives, decays or "rots," sooner or later, it is a question of time and circumstance *when*, and *how* this final result shall be attained. A reasonable supply of potash in the soil is known to promote the healthy growth of the woody fibre in plants, (which forms the lint of cotton and a part of its seed) and also favors the perfect organization of starch, sugar, oil and the so-called protein compounds; therefore let wood ashes be applied to the "sandy land" where cotton rots.

It is an unwise, a bad system of cultivation that makes so many old and deserted fields in the cotton growing States. Nature never gets tired of growing crops of forest trees even on the very poorest lands of the South. This fact is full of instruction. Man wantonly violates her laws, and disease in a thousand forms is sent to chastise him into better conduct. How far Providence will punish the impoverishment of arable lands, we have all yet to learn. It will, however, be sufficient to compel a reform in our present system of tillage and husbandry. If one degree of rot, of "murrain," or other calamity, is insufficient to bring us back to the strait and narrow path of agricultural duty, another, and still another degree of chastisement will be added, until penitent, and willing to obey the laws of his Creator, man will properly feed the land that both feeds and clothes him. L.



The Southern Cultivator.

AUGUSTA, GA:

VOL. XIII, NO. 12.....AND DECEMBER, 1855.

CLOSE OF THE VOLUME.

THE present number closes our *Thirteenth* volume and the year 1855. We have several new and important features to introduce into our next volume, and hope to have the support and co-operation of all our present subscribers and a great number of new ones. Read the *Circular* on first page, of present number, and see how large a list of names you can forward us before the first of January, 1856. All the promised premiums will be most cheerfully and promptly awarded.

RENEW YOUR SUBSCRIPTIONS!

We may be pardoned for suggesting to all our readers the necessity of promptly *renewing their subscriptions* for the next volume (1856) at the earliest convenient day; so that we may arrange our new subscription books properly. Our terms are strictly \$1 *per annum in advance*, and these who fail to receive the paper after the present number, can easily renew their acquaintance with it by remitting us that trifling sum, with their proper Post Office address.

☞ We prefer, in all cases, that money be sent *directly* to us—our profits being so very small that we cannot afford to pay heavy commissions or per centage. When properly mailed (in presence of the Post Master,) or *registered*, we take all risks and assume all losses. Address

W. S. JONES,
Augusta, Ga.

TO OUR VALUED CONTRIBUTORS.

WITH the closing number of the *Thirteenth Volume* of the *Cultivator*, we return our unfeigned thanks to the faithful band of correspondents who have enriched our pages from month to month with the records of their experience and the suggestions of their minds. We hope *all* of them will continue with us, and that many new ones may be added to the list for the next volume.

We earnestly request every subscriber or reader who thinks he can communicate anything of value to his brethren in planting, farming, horticulture, stock-raising or

general plantation economy, to make the columns of our journal his medium for that purpose. If we do not publish all communications as soon as received, our friends are not to suppose that we deem them of no value. It is our aim to publish every worthy article as soon as possible after its reception; but our columns are so crowded, often, that months elapse after a communication reaches us before the proper opening presents itself.

We have still in our drawer for the next volume, many articles of merit, which will be published as soon as possible.

GEORGIA CATAWBA WINE.

On the 12th of November, a large party of gentlemen of this city and vicinity, met for the purpose of sampling some Native Wine made by Mr. CHARLES AXT, at his vineyards in Wilkes Co., Georgia. The Wine presented was the pure juice of the Catawba Grape, only about eight weeks from the vintage, and of the quality known as "Still Catawba." It was very fairly and impartially tested, side by side with several older brands, from some of the most noted Ohio vintners: and the best judges present unanimously pronounced it superior in aroma and purity of flavor to any native samples yet presented to their notice; and predicted for it the highest degree of excellence, when it shall have attained the proper age. If it were necessary to give weight to this decision, we might mention the names of several of the gentlemen present, who are no less favorably known for their connoisseurship in wines, than for their sound judgment and capacity in all practical matters of business; but we forbear, as the occasion was altogether informal and *extempore*.

The enterprize of Grape growing and Wine making may now be considered most auspiciously inaugurated in Georgia and the South; and it only remains for those who prefer the *pure* and *wholesome* juice of the grape to the vilely adulterated mixtures of commerce, and who wish to aid in the successful development of a most important and promising enterprize, to give the matter their countenance and support at the outset; and thus secure to the South, in a few years, an entirely new source of large income and profit.

Mr. A. still contracts for the planting and culture of Vineyards and the making of Wine, and will visit any neighborhood where he can engage 12 acres or more. His address is CHARLES AXT, Crawfordville, Georgia.

LATE PEACHES!—We had the pleasure of "sampling," on the 30th of October, a very good and fair sized freestone Peach, from the orchard of Mr. D. Redmond, near this city. From the appearance of the fruit, it might have been left on the tree at least a week longer without injury, and as Mr. R's *earliest* Peaches ripen about the 15th of June, we can thus enjoy a succession of this delicious fruit for more than *four months*. The Peach alluded to differs from "Baldwin's October" in being a week or ten days later; and as it is undoubtedly a seedling, Mr. R. proposes naming it the *November Free*.—*Augusta Chronicle*, Nov. 4.

SOUTHERN CENTRAL AGRICULTURAL SOCIETY.

DR. DANIEL, of Decatur, having laid before the Society a communication from Lieutenant MAURY, U. S. N., on the subject of extending to the land a system of Meteorological Observations similar to those which have been instituted on the sea. The communication having been read, the following Resolutions, in response, were adopted:

Resolved, That the Southern Central Agricultural Society cordially approves of the plan proposed by Lieut. MAURY, in the August number of the *American Farmer*, for extending to the land, for the benefit of Agriculture, the system of Meteorological Observations, which has done so much for navigation and commerce.

Resolved, That we commend the plan to the favorable notice of our brother planters in other States, and request the members of Congress of our own State to procure that degree of encouragement for Agricultural and Secondary Meteorology which has been so wisely and beneficially extended to the Meteorology of the sea.

Resolved, That the Secretary of this Society be instructed to forward a copy of these resolutions to each member of Congress from this State.

J. CAMDEN, Secretary, S. C. A. S.

Atlanta, Ga. Sept., 1855.

[We will publish the letter of Lieut. MAURY in our January number.]

THE RAINS!—The long drought, noticed in our last, was broken about the 7th of November by a general rain. It extended over the country for several hundred miles, and was everywhere most cordially welcomed. Many of the rivers are now in good boating order, and the earth is in fine condition for plowing, sowing winter grain, planting orchards, and all other agricultural and horticultural operations. Let our readers "take time by the forelock," and prepare all ground for next year's crops as early as possible. (See "*Work for the Month*.")

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY. is the title of a little volume just issued by our friend, VICK, of the *Genesee Farmer*. It contains directions for the preparation of the ground for the Orchard and Fruit Garden, Planting, Pruning, &c.; with list of Fruits recommended by the American Pomological Society and the several State Societies. Also, plain directions for making and planting the Lawn and Flower Garden, and a catalogue of the Nurserymen in the United States and Canada; illustrated with 60 engravings, representing various forms of trees, leaves, and fruits, designs for plantations, pruning trees and grape vines, &c., &c. It is, in short, a perfect horticultural *rade mecum*, and is well worth four times its price, which is only 25 cents, or \$2 per dozen. Address, JAMES VICK, Jr., Rochester, New York.

OHIO STATE FAIR.—The receipts of the Ohio State Agricultural Fair, held a short timesince, amounted to about \$10,000 exclusive of \$3,000 contributed by the citizens of Columbus. The premiums distributed amount to \$6,000. It is stated that \$6,000 were offered and refused for one of the bulls exhibited. Another was held at \$4,000, and two others at \$3,000 each. The owners of a cow also refused an offer of \$1,800. There were eleven imported bulls exhibited, the aggregate value of which amounted to \$25,200, and ten cows valued at \$12,400.

FISH PONDS AND FISH BREEDING.—Read the very valuable article of our learned friend, Dr. BACHMAN, in present number. It treats on a subject of great interest to all residents in the country, and we are sure our readers will join us in thanking Dr. B. for the labor and research which he has bestowed upon it. The conclusion of the essay will appear in our January number.

THE ALABAMA FAIR.—We hope to have the pleasure of attending this initiative exhibition of our sister State, but the early day at which we are obliged to go to press (15th of Nov.) will, of course, preclude all notice of it until the issue of our January number.

THE GENERAL INDEX FOR PRESENT VOLUME, prepared with much care, forms a portion of this number. It can easily be detached and placed in its proper place, at the beginning of the volume, by cutting the leaves in the usual way.

LARGE APPLE.—The Editor of the *Wilkes Republican*, has been shown an apple measuring 141-2 by 143-4 inches in circumference, and weighing 21 1-2 ounces—over 14-4 pounds.

LARGER YET!—Our friend, J. VAN BUREN, of Haber-sham, sends us an account of an apple raised in his vicinity measuring *eighteen inches* and weighing *thirty ounces*! Have any of our readers ever seen a larger one?

MADAGASCAR OR BRAHMIN CATTLE.

We find the following in the *Norwich (Conn.) Courier*, and should imagine from the description that the animal alluded to must be closely allied to the Brahmin stock of our friend, Dr. DAVIS, of So. Ca. Who can furnish us a full and particular description of the Madagascar cattle?

THE MADAGASCAR BULL.—No animal at our County Fair attracted more attention than a beautiful Madagascar bull, the property of Thomas Fitch, Esq., of New London. This animal, as we learn, was brought to New London by Capt. Wm. R. Brown, in command of the whale ship Hannah Brewer, in the summer of 1854, and is represented to have been two years old last February. He was purchased from the "Ebony King" of the Island of Madagascar, and selected from his herd of some thousands in number. The whalers who visit that island state that this breed of cattle often grow to a very large size—that they frequently purchase bullocks there weighing 1100 and 1200 pounds—that the cows produce a much richer milk than is ever seen in the United States—far superior to the milk of the celebrated, "Alderney." The most marked peculiarity of the animal's form, is a large high hump on his fore shoulder. His shape, with this exception, is strikingly beautiful. He has a fine back and quarters, clean, delicate limbs, hair as fine, short and glossy as our best blood horses. The skin, on close examination, is found to be nearly an orange color, indicating the rich quality of the milk from such stock. By the natives of Madagascar he is called the "Sacred Bull." The animal at our Fair is supposed to be the only full-blooded Madagascar bull ever imported into the United States. We shall be curious to see what sort of animals a cross of this Madagascar bull with some of our own breeds will produce.

GARGET, OR SORE TEATS IN COWS.

EDITORS SOUTHERN CULTIVATOR—If any of the readers of the *Cultivator*, through its pages, would inform us of a remedy for the Sore Teats, or Bag, in milch cows, they would confer a great favor and profit on many of us, as that impediment is very prevalent and affecting (or injurious) in this section of country, and probably elsewhere. Also, we wish to know of an antidote for Crickets, as they are only a shade less annoying than the Locusts of Egypt were.

R. K. B.

Webster, Texas, Oct., 1855.

RICE—ITS CULTURE, &c.

EDITORS SOUTHERN CULTIVATOR—I have made this season a considerable quantity of Rice and wish in after years to turn my attention to the production of this article on a more extended scale, but before doing so desire some information on the subject of cleaning it and preparing it for market; and I hope you may be able to give me the *modus operandi* in the rice districts, or put me on the track of obtaining it.

What I mostly wish to know is the sort of mill or machinery which takes off the chaff and the prices of the different kinds used, if there be such different varieties.

I would be pleased also to learn the manner of cutting the crop as I have thus far used the ordinary reap hook.

If you are prepared to give an opinion as to profits of lands cultivated in Rice as compared with Cotton at, say, 8 cents, I will thank you for such opinion.

Very truly yours, &c.,

H. D.

Hamburg, Ala., Nov. 1855.

I Will our friend, "R. C.," of Beaufort, or some other of our Rice planting subscribers, be kind enough to reply to the enquiries of H. D., through our columns, and oblige us? Pending these replies, and to oblige our friend, "H. D.," we give the following advertisement a gratuitous insertion.

TO RICE PLANTERS.—The subscribers are desirous of calling the attention of those interested in the Hulling of Rice, to their newly invented Machine, which surpasses all others now in use. The advantage of these Machines consists in its simplicity, durability, and the great amount of work which it will perform without the least injury to the grain. The Machines are portable, and well adapted to hand or steam power; can be transported ready for use. These Machines can be made to hull from 20 to 500 bushels per day—varying according to size. All necessary information will be given by addressing the Inventors, at their Manufactory, 114 Cliff-street, New York City.

ROBERT & JOHN E. ANDERSON.

Do our Rice Planters know anything, practically, of this machine, and will they report on its merits, compared with others—Eds.]

SWEET POTATOES are excellent in making bread, and makes a pie nearly or quite as good as the squash. It has a peculiar, agreeable flavor, and is called easy of digestion, is wholesome and nutritious.

The recipe for making pies of the sweet potato is as follows:—Boil soft, peel and mash them. To every quarter of a pound, put one quart of milk, three tablespoonfuls of butter, four beaten eggs, together with sugar and spices to the taste.

The sweet potato is an excellent crop for milch cows, and they are very fond of them.

PLANTING IN JEFFERSON—LETTER FROM MAJOR DOUGLASS.

The following letter from a friend in Alabama, and the reply of Major DOUGLASS, will explain themselves. Major D. is the very competent and gentlemanly manager of Mr. WARREN's plantation, to which brief allusion was made in our October number:

EDITORS SOUTHERN CULTIVATOR—In the Oct. number of the *Southern Cultivator*, or page 313, you state that L. C. WARREN, Esq., cultivates, in cotton and corn, from fifty to sixty acres to each hand and mule; which has much surprised me, and, no doubt, many others.

One of my neighbors, who about half cultivates his crops, says he can cultivate 40 acres, to the hand and mule, which I doubt very much; but, I do not doubt his ability to cultivate 30 acres to the hand and mule, in the way he does it: which would not be done by any one of his neighbors.

Will you please inform me by letter, or through the columns of the *Southern Cultivator*, how Mr. WARREN cultivates from 50 to 60 acres to the hand and mule, the kind of land cultivated, the kind of stock and implements employed &c., &c.

Your obt. servant.

N. T. S.

Forkland, Ala., Oct. 1855.

Upon receipt of the above communication, we addressed Major DOUGLASS, who replies as follows:

D. REDMOND—Dear Sir: In answer to your request, I give the following statement:

The amount of land cultivated is about 14 hundred acres, and it is equally divided in corn and cotton. The number of hands is 44, and 22 mules, employed in the culture of the same. The mode of culture is as follows: The corn land was well broken with Turning Plows, in the winter and planted 5 1-2 by 3 ft.,—plowed first time, by running an 8 inch plow next the corn and finished with 18 and 22 inch "Buzzards" and well hoed,—2nd time, run an 18 inch Buzzard next the corn, and finished with the 22 inch Buzzard; 3rd time run the Turning Plow next the corn and follow with the same and finished with the 22 inch Buzzard, which leaves the corn in a situation that I am not ashamed to show to the world.

For cotton, I bed my land with good Turning Plows and plant the 1st of April; work first time by running the bar of my Turning Plow next the cotton, and hoe—2nd time, run 18 inch Buzzard next to the cotton and left until hoed second time; and then split the middle. For 3rd working, plough with 18 inch Buzzard next the cotton and finish with 22 inch—4th and 5th time in the same manner.

Our soil is light as you know; our mules are good, and they are well driven.

Truly yours,

JOHN M. DOUGLASS.

Millon Place, Jefferson Co. Ga., Nov. 1855.

THE CRANBERRY CURE FOR ERYSIPELAS.—The New Haven *Palladium* records another case of the complete cure of Erysipelas by the simple application of raw cranberries pounded fine. The patient was a young lady; one side of her face had become so swollen and inflamed that the eye had become closed and the pain excessive. A poultice of cranberries was applied, and, after several changes, the pain ceased, the inflammation subsided, and in the course of a couple of days every vestige of the disease had disappeared.

THE GOOD OF A PIPE.

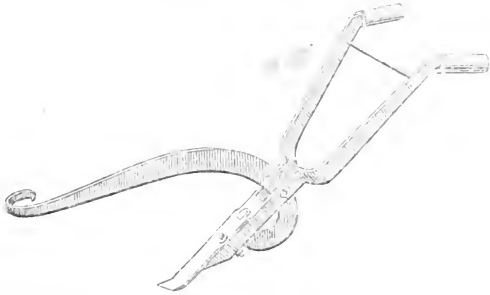
EDITORS SOUTHERN CULTIVATOR—A smoking tobacco pipe is good for a horse, a sick or cholicky horse or mule,

As a remedy for spasmodic cholick in horses, it is undoubtedly a remedy of considerable value, and well worth a trial.

Get a common tobacco pipe and stem, or a larger than common pipe and stem, plug up the end intended for the mouth, and drill two or three holes near said end in the sides of the stem for the egress of smoke. Fill the pipe with good dry tobacco, fire it well and insert the stem well up the *rectum* of the horse and as soon as the tobacco is consumed refill the pipe until a few (3 to 5) pipes full are administered, when the spasmodic strictures of the intestines become relaxed, the bowels begin to act kindly and naturally, and the the horse relieved, begins to eat.

BOB SHORT, M. D.

Piney Woods, Oct., 1855.



FORMAN'S PATENT IRON PLOW STOCK.

IN accordance with the promise in our November No. page 315, we present a cut of this very valuable implement. It is figured above with one of the subsoil points attached, but the plow is so made that any number of other points of divers forms and for different purposes, can be substituted in a moment. Among the points or shares furnished with the plow, when desired, are the following. Subsoil points, of different forms; turning shares: medium ditto; sweeps or grass killers; openers, or double turning shares, &c. &c. I. C. FITTEN & Co., of this city, are the general Agents.

A SHORT LETTER ON EXTRAVAGANCE.

"A little house, well filled."

Our houses are too large and too costly. We have, usually, one or two rooms that are merely for show; a parlor, perhaps two, with folding doors between that are only open for company, that are too nice for children to play in, too large to be warmed readily in winter, in short, like a dandy, too nice for anything useful. And, then, often, there is a part of the house unfinished, a large attic which might accommodate a whole family, occupied now by a few old boxes of white beans, and a few bunches of catnip and penny-royal, and some broken chairs and a cradle. This upper story was probably put on because you wanted a house as large as your neighbor's. Now, a house should, in some measure, fit a family, as a suit of clothes should fit an individual. Although it is not, perhaps, always safe to count your children before they are born, and, therefore, the capacity of your house must often

be by estimation, yet everywhere are houses going up, with a perfect understanding that a considerable part of the room is to be useless, either kept for an annual party, or to remain unfinished. If we who plan and build such houses, would reflect upon it fairly, we should see that no rational man would entertain for us any more respect for living in a house which we do not fill, than for wearing a suit of clothes made for a person twice our size.

Let us have "a little house, well filled," with no spare room except a chamber for our friends, and no lumber room of a garret, for ghosts and rats and mice to inhabit. The thousand dollars which even careful men generally expend in building "a house to live in," merely to conform to fashion, or an architectural whim, costs the poor wife and children many a lecture upon penny economy, which might otherwise have been spared. And when you have built or purchased a house too large for your wants, the evil has but commenced. Your large and numerous rooms require large and numerous carpets, and curtains, and sofas, and other adornings. But this is not all, nor the worst of it. The house and the furniture must be taken off, swept and dusted daily, and scrubbed and scoured spring and fall, when *house cleaning* time comes round. You must either pay for help to do all this, or what is perhaps more common, allow additional burdens to fall on your wife, who has already a ceaseless round of cares. A sensitive or even a just man should see that, in this land, where servants are an expensive luxury, at best, his wife have comfort and leisure, and a selfish man may soon learn that he cannot lead a peaceful and happy life with a woman who is overrun with hard work and family cares. We think if our reader himself is not open to censure in the particulars named, he may find plenty of his neighbors to whom our remarks will apply.

And then, again, we are extravagant in our household furniture. The ladies must come in for a share of our lecture on this topic. The furniture of a house is mainly for use and comfort. Carpets and sofas and chairs and tables are chiefly designed to promote warmth and quiet and physical enjoyment in some way. A carpeted floor is warmer in winter, and children make less disturbance on it than bare boards; and, besides, they require much less labor to keep them in nice order. Let comfort, then, be regarded, principally in selecting furniture.

But a nice perception of the fitness of things which is good taste—the faculty of producing harmony between the occupants of the house and the house itself, and between the house and the furniture and surroundings—this is what you do not buy at the upholsterer's, this is beyond price, and a matter, madam, in which it is your province to excel. Let the furniture say, as plain as things can speak, this house is for the comfort of those who live inside of it and not for mere callers and stangers. This carpet is not too good for the children to roll on, this arm-chair will not be soiled by being occupied, and the bright sun-light may visit the inmates in the morning, bringing health and cheerfulness, without fear that it will fade the brilliant colors of the silk and velvet. If, when your house is built and furnished, you have money to spare for articles of mere taste and luxury, the world is full of books and pictures, and a thousand other things, which will afford to a refined and cultivated mind far more rational enjoyment than a whole warehouse of gilded mahogany.

On the whole, we think the ambition which is common among all classes, to live in large houses, elegantly furnished, is leading us daily into embarrassments and discomforts, which as a thoughtful and rational people, we ought not longer to suffer.

BLIND STAGGERS IN HORSES.

EDITORS SOUTHERN CULTIVATOR—I see an inquiry in your *Cultivator* for a remedy for the Staggers (or blind Staggers,) in horses. From some experience and good information, the best remedy of which I have any knowledge is this:

So soon as you are satisfied that the horse has the Staggers, bleed severely on both sides of the neck—then pour in a teaspoonful of the spirits of Hartshorn in one of his ears (or both if the horse be very bad); be careful to tie or confine the horse some way, lest he might kill you, or himself, or both. I doubt not but that the above is the best remedy for the Staggers known—as much as the Staggers in horses is an alarming epidemic, particularly in the South, you will please give this room in your *Cultivator*.

Yours truly,

R. K. BRADSHAW.

Webster, Texas, Oct. 1855.

PHOSPHORIC ACID IN THE OLDER ROCKS.

Dr. DAUBENY, Professor of Agriculture in the University of Oxford, has paid particular attention to the interesting subject of Phosphoric Acid as it exists in both igneous and aqueous rocks, in combination with lime, iron, alumina and other bases. The importance of this acid, in forming the skeletons of all the higher orders of animals, and the seeds, leaves and stems of all nutritious plants, is well known. Compared with iron, chlorine, lime, soda, potash, magnesia, and other elements of crops, *phosphorus* may be regarded as a precious mineral. It is worth, in its pure state, from two to three dollars a pound—a fact which abundantly proves its scarcity in that condition.

Granite and other primitive rocks are not without phosphoric acid; but it exists in such minute proportions that it cannot be extracted without costing more than its weight in pure gold, which is often taken from the same rock.

Prof. DAUBENY adopted the following ingenious process for demonstrating the presence of this acid in "some of the older rocks" where the amount was too small to be appreciated by the ordinary chemical tests:—He ground down to an impalpable powder fragments of rocks, and planted barley in the pulverized mass. With the aid of water, and the other purely organic elements of the plant, it grew; and when carefully analysed, it yielded more phosphoric acid than the seed contained. Tillage and atmospheric agencies developed in a few weeks, or months, a fertilizing element from a recently compact, crystallized rock, which the high heat and concentrated acids of the chemist failed to bring out even to the degree of "a trace." This result illustrates a *principle*, applicable alike to scientific agriculture and the quantitative analysis of soils, for which the writer has long contended, namely, that Time is an element of commanding power in the matter of fertility and the growth of plants. Time did not create from nothing the phosphoric acid which the growing barley extracted from finely comminuted granite; but it served to consummate certain chemical changes in mineral compounds, resulting in the formation of the phosphate of lime and magnesia, as they are found in good soils, and in plants that grow thereon. Barren soils often contain the elements of fruitfulness in a *latent state*, which science and art can profitably develop, and render available to the cultivator. Among these latent elements, the earthy materials from which human bones are formed are not the least worthy of consideration. Burning granitic rocks, and even common clay, with fragments of lime stone, promises, by the results of some experiments, to decompose

the phosphates of iron and alumina, which are worthless for agricultural purposes in that condition, and produce the phosphate of lime. Judging from the composition of many rocks and soils which abound in Georgia, they have more need of lime than phosphoric acid to work the purposes of the Creator. Before this mineral acid will disconnect itself from alumina or iron, or manganese, it must be brought in contact with the alkaline earths, lime, or magnesia, or the alkalies, potash or soda. This is one reason why these alkalies and alkaline earths are so essential to fertility. Similar remarks apply equally to sulphuric acid which forms a poison to crops when combined with iron to a considerable amount in the soil, or with alumina. With lime it forms gypsum—a well known fertilizer.

Going back to the earlier ages of our planet, we find very few remains of either animals or plants until after vast masses of lime and soda had been separated from igneous rocks. Indeed, the present advanced knowledge of vegetable and animal physiology fails to indicate the possible subsistence of living beings before the disintegration, chemical decomposition and re-composition of the primitive crust of the earth.

The dynamics of geology are much better understood than either its paleontology or chemistry; or in plainer language, the mechanical forces of volcanoes, earthquakes, frosts, heat, tides, washing rains, rivers, and moving water generally, have been more elaborately and successfully studied than the conditions under which all the successive races of plants and animals have lived and died. There was, probably, never formed a single nerve, nor muscle, which did not have phosphorus as one of its organized elements. Muscles and nerves are made, not from their constituents in a mineral form as they are found in rocks, air, and dissolved in water, but from constituents as they exist organized in plants, or in the flesh of animals. A plant can subsist and flourish on food that will fail to nourish any animal, although the animal may feed and fatten on the plant whose disorganized elements are poisonous.

The farmer who acquires a correct knowledge of the changed and changing conditions of phosphoric acid in "the older rocks," in the more recent sedimentary formations, in soils, in plants, and in animals, will be prepared to use this costly fertilizer to a much better advantage than one who has not such information. He will have clearer and truer notions of all the mechanical operations of tillage, and see why coarse materials in cultivated earth are unfriendly to its permanent fruitfulness. Dr. DAUBENY had no hope of drawing the earthy part of bones directly from a rock without grinding it to a powder nearly as fine as the particles of fine clay. It must be in a condition to imbibe and condense gasses for chemical purposes. The atmosphere is a vast store house of choice chemicals, and nature uses them with unerring skill in clothing our fields with the most luxuriant herbage. The good husbandman has but to study and obey her laws, to command the highest success. L.

TO CURE SHEEP SKINS WITH THE WOOL ON.—Take 1 teaspoonful of alum and 2 of saltpetre, pulverize and mix well together; then sprinkle the powder on the flesh side of the skin and lay the two flesh sides together leaving the wool outside. Then fold up the skins and hang them in a dry place. In 2 or 3 days, as soon as they are dry take them in and scrape, them with a blunt knife till clean and supple. This completes the process, and makes a most excellent saddle cover. Other skins, which you desire to cure with the hair on, may be treated in the same way.

We can speak in favor of the above recipe. It does all it promises. Such skins make excellent mats for in doors. —*Farmer's Companion*.

Few readers can be aware, until they have had occasion to test the fact, how much labor of research is often saved by such a table as the following—the work of one now in his grave. If “History is Poetry,” as one who is a true poet himself forcibly remarks, then here is “Poetry Personified.”—[*Harper*.]

1607	Virginia	first settled by the English.
1614	New York	first settled by the Dutch.
1620	Massachusetts	settled by the Puritans.
1623	New Hampshire	settled by Puritans.
1624	New Jersey	settled by the Dutch.
1627	Delaware	settled by Swedes and Fins.
1635	Maryland	settled by Irish Catholics.
1635	Connecticut	settled by the Puritans.
1636	Rhode Island	settled by Roger Williams.
1650	North Carolina	settled by the English.
1670	South Carolina	settled by the Huguenots.
1682	Pennsylvania	settled by Wm. Penn.
1733	Georgia	settled by Gen. Oglethorpe.
1791	Vermont	admitted into the Union.
1792	Kentucky	“ “
1796	Tennessee	“ “
1802	Ohio	“ “
1811	Louisiana	“ “
1816	Indiana	“ “
1817	Mississippi	“ “
1818	Illinois	“ “
1819	Alabama	“ “
1820	Maine	“ “
1821	Missouri	“ “
1836	Michigan	“ “
1836	Arkansas	“ “
1845	Florida	“ “
1845	Texas	“ “
1846	Iowa	“ “
1848	Wisconsin	“ “
1850	California	“ “

Horticultural Department.

WORK FOR THE MONTH—(DECEMBER.)

[DECEMBER derives its name from the Latin *decem*, ten; as, in the Roman year, instituted by Romulus, beginning with March, it was the tenth month. It answers to the Jewish *Tbeeth*, (Esther ii. 16,) which signifies *miry*, and is the fourth of their civil and tenth of their sacred year. By the Saxons it was named *Aerra-Geola*, or *Before-Christmas*.]

THE PLANTATION.

Cotton Picking ought now to be finished as soon as possible, and the balance of the crop packed, and sent forward to market, so that the planter and his hands may have a little leisure before commencing the next year's labors. The planting of “our great staple” is a drudgery at best; but it is made more laborious than necessary, by the “never ending, still beginning” system of most our planters. Let our readers who are so deeply interested, begin the reform at once.

Corn land of last year, intended for the same crop next year, should be broken up thoroughly and deeply; and, if stiff, bedded up and exposed to the ameliorating influence of the winters rain and frost. Plow across the furrows of last year, and subsoil, if possible. Land cannot be made too deep or rich for corn—it is a gross and exacting

feeder. Clear up, also, some good new, fresh land for the coming Corn crop.

Wheat, Rye, Oats and Barley may also be sown yet, but the sooner the better. Note what has been heretofore said about *thorough preparation of the soil*, and put your seed in right. Manure heavily, plow deep, and pulverize as fine as possible.

Fruit Trees of all kinds should be set out during December and January, if possible. For directions, see our November number, page 346; and for the proper selection of trees, consult the different Southern Nurserymen, whose advertisements will be found in our pages. One good Southern seedling fruit tree, worked on a native Southern stock, is worth half a dozen of dwarfish, slow-growing Northern trees. The time for importing Fruit trees is past and gone forever—henceforth the current sets from the South, northward—trees raised in Georgia being now sent to supply orders from North Carolina and Virginia.

Hedges of all kinds should now be planted. See directions in Nov. number.

With the closing year, close up all accounts; open new books, and make a fresh and energetic start with the new era which is now dawning upon us.

THE GARDEN.

Sow *Cabbage, Turnips, Parsnips, Lettuce, Carrots, Radishes*, &c., &c. Haul plenty of manure on your garden, plow it over deeply; or, better still, have it well spaded, burying under all enriching animal or vegetable matter. Transplant *Brocoli, Cabbages, Celery, “Collards,”* &c. Dress and manure your *Asparagus* beds, not forgetting to give them a liberal top-dressing of salt, before spring. Save all old bones, soap-suds, dead leaves, decaying vegetables, &c., &c., and make up into compost heaps for future use. Plant choice Fruit Trees, selecting varieties which are known to be adapted to the South. Our Southern Nurserymen, have paid especial attention to the propagation of choice native varieties, and will doubtless, be able to supply all orders.

Strawberry Beds, for spring bearing, may also still be planted, according to directions given last month.

THE NURSERY.

Propagate all the choicest and best varieties of Southern fruits, by grafting and from cuttings. The Quince, the Fig, the Grape and the Pomegranate grow readily by the latter method, when planted in moist, shady ground; and the Apple, Pear, Plum, &c., may be successfully grafted on good, strong seedling stocks.

SUGAR GROWING—THE DATE PALM, &c.

In regard to the Chinese Sugar Cane (*Holcus Saccharatus*), the editor of the New York *Tribune* writes, from Paris, under date of July 17:

I have just had a conversation with Mr. Wray, an intelligent English planter from Natal, (South Africa,) who has been a sugar-grower in both the East and West Indies, and who is confident that a plant known among the Kaffres as the *Imfy* might be advantageously naturalized and grown in all temperate climates for the production of sugar. He says it will grow wherever Indian Corn will ripen,

though it likes a hot, bright summer; that *two crops a year may be harvested in our Cotton States* and one in any part of our country south of 45°; that it does not require replanting oftener than the Hop, (say four times a century) and that it will yield three to four thousand pounds of choice sugar to the acre at each harvest. A plant similar in species but inferior in kind has recently been brought hither from Northern China, and is doing well. The expressed and boiled juice of this plant has hitherto been supposed incapable of granulation, but Mr. W. has discovered a process which obviates this difficulty. I heartily trust this subject will receive due attention in America, and I think Mr. Brown, in the Agricultural Department of our Patent Office, can give further information with regard to it.

Mr. Wray is also confident that the *Date Palm* may and ought to be naturalized and extensively grown in our Southern States. He says it begins to produce five years after planting, (the ground being devoted to corn, cotton or other crops meantime,) and that, with very little attention thereafter, it will yield *five tons* per acre of fair sugar. Will not the South look into this?

The *Boston Transcript*, of a late date, contains the following:

A NEW SUGAR PLANT.—The forthcoming Agricultural Report of the Patent Office, will contain an interesting account of a new variety of sugar plant, which, it is thought, may be introduced with advantage into our country. The plant is called the *Sorgo Sucre*, and has been cultivated to a considerable extent in France. Under the auspices of the Patent Office the seeds of it have been distributed in various parts of the United States. The *Sorgo Sucre* grows very much like Indian Corn, and in rich lands attains a height of from two to three yards. It is an annual in France, but it is believed that in the Southern United States its roots would survive the winter and send up new shoots in the spring.

The juice which is contained in the stalk of the plant furnishes sugar, alcohol and a fermented drink analogous to cider. The proportion of sugar contained in the juice is from 10 to 16 per cent., and about one-third part is uncrystallized. Although in a Northern climate this last property would be an obstacle to the extraction of the crystallized part of the sugar, yet it adds much to its facility of readily fermenting, and consequently to the amount of alcohol which may be produced from it. In a Southern climate the proportion of uncrystallized sugar would be less.

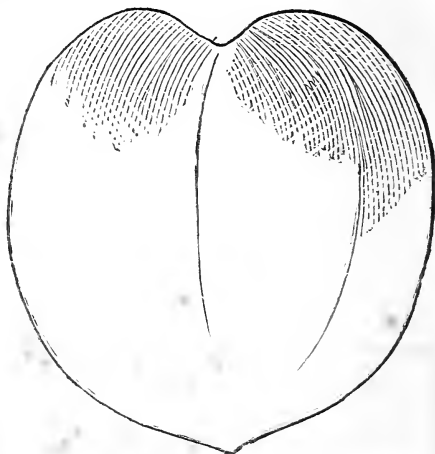
It is thought that the *Sorgo* may take the place of the sugar cane in the more northern of the Southern States, where the latter is annual. Its molasses is identical with that manufactured from the cane, and its stalks and leaves furnish nutritious forage for animals. In the manufacture of brandy or alcohol the uncrystallized sugar can be turned to excellent account. Experiments have shown that the central part of the stalk contains the greatest amount of saccharine matter, and that the best time to cut it is when the seeds are in a milky state. The ripeness of the seeds, however, does not appear to lessen much of its productions of sugar.

REMARKS.—We raised several stalks of Chinese Sugar Cane, the past season, in our garden. They grew to the height of 10 or 11 feet, bearing large panicles of seed, somewhat similar to Broom Corn. The stalks contained a great quantity of very sweet cane-like juice, of a very pleasant vinous flavor. That it would make a large per cent. of excellent sugar, we have no doubt—the only difficulty, as above hinted, being in the granulation. This process will soon be understood, however; and in the meantime

the juice can be converted into fine syrup or molasses. We shall continue the cultivation of this plant as *green forage for stock*, if not for sugar making. From some partial experiments, we are inclined to think it will bear repeated cuttings, like Millet, but we await another season's trial before pronouncing fully on this point.—Eps. So. CULT.

THE STANWICK NECTARINE.

THE sensation created in England and France by the introduction of the Stanwick Nectarine in 1846 has had few parallels; but it has subsided on discovering that the climate was not entirely favorable to its perfection. In our own country, however, sufficient time has not elapsed fully to test its capabilities; it is still hoped that it may succeed on the walls of open gardens. At its first appearance it was supposed it was "destined to throw out of cultivation most of the stone fruits so highly prized by Europeans; also, that the Peaches of Paris, as well as the Nectarines of the island of Jersey, were tasteless and worthless when placed by the side of the Stanwick Nectarine."



We have received a single fine specimen this season from Mr. Caleb Cope, successfully fruited by his gardener, Jerome Graff, and present an outline of the fruit.

This Nectarine fruited for the first time in the United States, at Mr. Cope's, a year ago. The fruit was exhibited at a stated meeting of the Pennsylvania Horticultural Society, but the committee on the fruit failed to give a description, though the curiosity of our horticulturists was excited to know something respecting it. The only notice taken was the award of one dollar Mr. Cope's gardener. It seems to do well here, except its liability to crack—a feature from which it may be exempt when allowed to mature in a cold house: this will be soon tried, as two plants are now growing in Mr. C.'s cold vinery. The plant from which our figured specimen was plucked is small, growing in a ten inch pot. Last year it had five beautiful Nectarines upon it, some of them slightly cracked; the present season it produced but three, two of which decayed before maturity. The plant has labored under great disadvantages, in being forced two successive seasons, and without being shifted. In the flavor of the fruit we think it far surpasses any previous variety known to our cultivators. It has nothing of the insipidity of the Nectarine, and less than usual of its peculiar odor; it may be pronounced a smooth skinned Peach of the most delicate character, exceedingly tender, rich, juicy and sugary, without the slightest trace of the flavor of prussic acid. When we speak of the odor of the common Nectarines, we

do so disparagingly, for the smell and the beauty of the fruit have hitherto comprised its principal value.* The plant is growing on a Peach stock, and the fruit may be said to equal in size any of the melting varieties. Mr. Graff deserves great credit for its introduction.

It may be as well to reproduce here some of the particulars respecting this novelty from the Journal of the London Horticultural society. Fruit of this new and extraordinary production was received August 29th, 1846, from Lord Prudhoe, in whose garden at Stanwick park it had ripened. He obtained the variety from stones given him by the vice-consul at Aleppo, then residing near Suedia, in Syria, whose favorable climate is peculiarly suitable for the cultivation of Asiatic or European fruits. The vice-consul, Mr. Barker, brought to England Peaches and Nectarines with sweet kernels like a nut, probably never heard of till their existence was announced by him. The fruit of the Peach and Nectarine, partaking so much as it does of the qualities of the bitter Almond, must have been very deleterious in its unimproved state. It was considered unlikely that amelioration would be carried much farther. For at least a century, little improvement has been effected, and in every variety hitherto the kernels have proved intensely bitter. But at last this is overcome; in the specimen above described, the deleterious quality considered inherent in the species has disappeared.

The tree on its own roots is a strong and robust grower and continues to grow late in autumn, and has hitherto retained its leaves in England throughout the winter. Lord Prudhoe's gardener has no doubt that when worked on Apricot, Plum, or Almond stocks, it will prove quite hardy there, and bear well even in the North. The original price was fifty dollars a plant.

What say our hybridizers can be done to give it an American constitution?—*Horticulturist*.

VERBENA.

THE cultivation of the Verbena in this country is of comparative recent date. It is a native of the hills in the vicinity of Buenos Ayres, South America, growing through an extensive tract of country in great profusion. It was first introduced into this country by Robert Buist of Philadelphia, and from the original *Verbena Chamdrifolia* or *Melindris* have been raised almost innumerable splendid varieties, embracing every color and tint. It is one of the richest ornaments of the flower garden. Its value is greatly enhanced from the fact that it blooms profusely from early Spring to late in Autumn, until the ground becomes hard frozen; it always looks healthy, bright and vigorous, having the advantage of not being affected by the sudden changes of temperature or by moisture. The habits of all varieties are similar, they being naturally prostrate creeping plants, taking root freely wherever the stems come in contact with the ground, and sending forth large clusters of beautiful flowers. The Verbena is as useful as well as a highly ornamental plant in forming masses, groupings, mounds, or borders.

Their natural tendency to trail, the brilliancy and elegance of their blossoms, which they scatter in great profusion wherever the parent stem runs, make them highly desirable for the uses above named, as well as decorative for the green-house or parlor. The past season has been productive of many beautiful varieties comprising some of the richest gems in cultivation. The raising of these flowers is now attracting great attention, and they will probably ere long form one of the leading attractions at our floral exhibitions. They are easily cultivated and cared for, as they grow vigorously and

with full native health in our soil which seems eminently congenial to their growth. They are easily raised from cuttings or from seed. The best soil for them is brown loam, fine white or silver sand, and well rotted chip dirt, with a little stable manure that has been well rotted and reduced fine; they do not require much manuring. A rather poor but open soil seems best adapted to the perfecting of this flower; if too rich soil is used they are apt to grow too much foliage and the flowers are fewer and not so rich in color.

In preparing the ground for them it would be well to mix a little lime or ashes in the soil to kill the lice that often attack them at the roots; if these should fail, tobacco water may be used with perfect success. By forming a small cavity around the plant affected, and pouring in the decoction round the roots, it will positively exterminate the lice and not injure the plants in the least. Two or three applications will be sufficient, as the tobacco is vegetable, and may be used very strong with perfect safety. The Verbena seems particularly adapted to our hot dry climate, although they retain their brightness undimmed in rainy weather; they should however be fully exposed to the sun, as it is very essential to their growth and beauty of blossom.

A little care and attention in cultivating this beautiful plant will be amply repaid in the unrivalled beauty with which it will clothe the flowery garden, and in the gladness which it will give in viewing its brilliant blossoms, after all other gems of the garden have been nipped and despoiled by the frosts of Autumn.—*Dexter Snow's Catalogue*.

NORTH CAROLINA FRUITS.—Who has not heard of the prolific soil of Buncombe? (we do not mean in the matter of eloquence merely.) It is said that the Irish potatoes of that region are the best in the United States; and we have heard much from travellers of the excellent quality of the fruits. We can believe even more than we have heard, after examining a specimen of apples with which we have been complimented by Messrs. Johnstone, formerly of this State, who have engaged in farming on the French Broad River—a region alike dear to the seekers after the picturesque and the fruitful. The largest specimens of these apples weigh over 20 ounces, and they are of a fine flavor. A country that can produce such fruits is worth cultivating, and we may look forward with anxious hope to the time when improved means of transportation will substitute in our market the abundant and delicious fruits of North Carolina for those which we now get sparingly from a more distant region.—*Charleston Mercury*.

THE CARBON OF PLANTS.

BY ROBERT NELSON, A. M., OF MACON, GA.

(Concluded from November number, page 338.)

EDITORS SOUTHERN CULTIVATOR—In consideration of what has thus far been said, there remains nothing for us to do but to inquire: whether the carbonic acid of the atmosphere is capable of yielding the requisite amount of carbon to the living vegetable kingdom? Before deciding this point, we will carefully consider everything for and against this supposition.

In support of the proposition, that the carbonic acid of the atmosphere furnishes the plants with their requisite carbon, may be mentioned, chiefly, the circumstance, that, as the vegetable carbon must originate from somewhere, and it does not come from the humus in the soil, it can only be from the carbonic acid, inasmuch as we do not, independent of humus and carbonic acid, know of

* We do not, by any means, agree to this—the Nectarine, with us, is a most delicious fruit.—Eds.

any carbonous body with which the plant comes in contact.

Moreover, we must observe that carbonic acid is found in water, in which it is also soluble; both of which facts speak much for the above-mentioned supposition. For carbonic acid is found everywhere in the atmosphere, which is constantly supplied anew; and all water, wherever it is collected, contains carbonic acid. No one has, as yet, attempted to prove that a plant did ever grow under a perfect exclusion of carbonic acid. But the most effectual proof of the plant's subsistence by means of carbonic acid, I am inclined to see in the circumstance, that while the plant is absorbing carbonic acid, it gives off oxygen; and thus a chemical activity is evidently called forth, to which we must pay strict attention. Chemistry, the science which is alone competent to give judgment in this expulsion of oxygen, knows of no other explanation than that the decomposition of water and consequently expulsion of oxygen is effected only by means of the carbonic acid, which is absorbed and made use of for the formation of the carbonous constituents.

I will finally introduce a relative experiment, in order more fully to support the proposition, that carbonic acid yields the carbon of the plant. "In spite of the innumerable quantity of works on the nourishment of plants," says a German professor of Botany, "nothing has, thus far, been more uncertain than the views of the requisite substances for vegetable nourishment; and this from the simple fact, that the matter was commenced at the wrong end, experiments and researches being lavished on fully developed plants, instead of first seeking the laws for the simplest cases. But the simplest and most natural object for such inquiries is *Protococcus viridis* or some other conferva which consists of one or a few cells, contains all the usual substances requisite for cellular life live freely swimming in the water. These, in order to grow, need nothing but pure water(?) that may absorb carbonic acid and ammonia from the atmosphere, in which both of these are always found, and perhaps a very small quantity of non-organic salts, the necessity of which in the life of these simple plants, is in conformity with the higher order of plants, pre-supposed only, but is not proved. They do, however, thrive more luxuriantly in water impregnated with a larger and larger quantity of carbonic acid, than in water mixed with a solution of mud, consequently with a solution of humus and humusates. In the latter they do not even thrive as well as in pure water—sufficient proof of how non-essential these constituents are to the life of the cell."

Considering what has thus far been said of the subject under consideration, we might almost here pass a final judgment; but, as it is my intention to be wholly impartial, we shall still have to inquire into what may be said against the supposition, that the plants are nourished by means of carbonic acid.

Not long after the supposition had been advanced, that the expulsion of oxygen of the living plants by the operation of light is very closely related to the absorption of carbonic acid, it was found that the same plant expels carbonic acid at night, but absorbs oxygen, and now certain people did not hesitate at once to place these day and night occurrences in vegetable life side by side. For, without inquiring into the relation of the quantity of the expelled and absorbed oxygen and carbonic acid, it was asserted that the oxygen, which is absorbed at night, should be the same that is again expelled by day, and that, *vice versa*, the carbonic acid which, is expelled at night, could be regarded only as that absorbed by day.

It is easily perceived, that, if the case did not really stand thus, then the idea of the carbonic acid supplying the plant with carbon, would be wholly out of the question; for equal quantities of expelled carbonic acid drawn from equal quantities of absorbed carbonic acid leave no

carbonic acid which might be used for the nourishment of plants. But the case does not stand thus. Indeed, we are not to doubt the above-mentioned effect, that oxygen is absorbed and carbonic acid expelled at night; but the experiment has proved that the oxygen, which is expelled by day when a plentiful supply of carbonic acid is present, amounts to more; so that it is a necessary consequence of vegetable life, that there is formed an air more rich in oxygen. One of the relative experiments is the following:—A grass-turf, four inches square, was laid in a porcelain bowl which swam on the water of a large basin and covered with a large glass bell (250 cubic inches), so that a certain quantity of air became excluded from the air without, at the same time with the grass. The grass was now and then moistened and carbonic acid added to the water on which the bowl swam. After the lapse of eight days, during which time the growing grass had, of course, been exposed to the interchanging influences of day-light and night, the capacity of the air had increased thirty cubic inches, and analysis taught that the confined air contained four per cent. of oxygen more than the air without. It is evident that this result could not have been obtained if at night there had been absorbed as much oxygen as was expelled by day. The same is the case with carbonic acid.

It was, moreover, a great error to attempt to correct these nightly occurrences with those that happen in the day-time. The plant does, at all times, both day and night, perform alternate operations with its associations and their constituents, and as a consequence of this alternate operation, a continual absorption and expulsion of one or other among these constituents takes place. Thus, in order to give an example, there happens both night and day a quantity of oxidations of vegetable substances, consequently occurrences, whereby oxygen is taken from the association; but the decrease thus occasioned in the atmospheric oxygen cannot be observed by day, because the oxygen that is given off from the living plant under the effect of light amounts to a far greater quantity. According to the above-mentioned experiment, the air does, consequently, in spite of this continual oxidation, receive more oxygen back again than is taken from it. As regards the carbonic acid, this, too, is absorbed both day and night by the living plant; but it is only in the day-time that this is used for the nourishment of the plant: at night, on the contrary, it is not used by the plant, but returns into the air together with the water, that is constantly evaporating from the surface of the leaves, consequently pursuant to a purely mechanical law, and there is no reason to suppose that it is the same carbonic acid which is absorbed by day.

I have, at last, got so far as to be able to pass a decisive judgment upon the question propounded at the beginning of this essay, namely, whether it is the humus of the earth, as such, or the carbonic acid of the air, that yields the carbon used by the plant? But it seems to me I may be spared the trouble, inasmuch as the answer—that it can be nothing but the carbonic acid—is too evident that I should have need to make use of logic. For we have seen that plants may grow without humus; that humus, provided it is really found in the soil, is most often present in so small a quantity that its contents of carbon is far from sufficient for covering the carbonous constituents of the vegetation in this soil; and, finally, that, even if it were found plentifully in the soil, it would be wanting sufficient water for its solution. Hence, we conclude that it is not humus from which the vegetable carbon originates. On the other hand, we recognised in carbonic acid the body which provides the plant with the requisite carbon, because it is constantly present in the associations of the plant, and is always replenished; and, finally, because oxygen is expelled while it is absorbed by the plant, which must be regarded as a proof of the fact, that car-

bonic acid is made use of for the production of the carbonous constituents of the plant.

Thus, I think, it has been made evident that it is not humus, but carbonic acid only that supplies the plants with their requisite carbon.

Advertisements.

FRUITLAND NURSERY.

TEN THOUSAND CHOICE TREES!

THE Subscriber offers for Fall and Winter Planting (1855-56) the following desirable trees, shrubs, vines, &c.:

APPLES.—A select list, of early, medium and late varieties, including many of the new and superior Southern seedlings, heretofore described in *Southern Cultivator*. 25 cents each; \$20 per hundred.

PEARS.—Dwarfs and standards, many choice varieties. 50 cents each; \$40 per hundred. Extra large trees, \$1.

PEACHES.—A succession from June till October, including many native seedlings. 50 cents each; \$20 per hundred.

APRICOTS, NECTARINES, PLUMS AND CHERRIES, of the best varieties. 50 cents each; \$10 per hundred.

FIGS.—Several choice varieties, including the *Celestial*, *Alcant*, *Flora*, *Geno*, &c., &c., 50 cents each.

GRAPES.—The genuine *Alzetta*, from Axt's vineyards; also Weller's *Concord*, &c. 50 cents each; \$30 per hundred.

QUINCES.—The Orange variety, well rooted and strong plants, at 25 cents.

STRAWBERRIES.—More than thirty Premium varieties, including all the most desirable. (See separate advertisement of select sorts, in present number.) Prices, 50 cents per dozen, or from \$1 to \$3 per hundred.

BLACKBERRIES.—The genuine New Rochelle or "Seacoast" Mammoth. Berries of extra size and flavor. Well rooted plants at 50 cents each.

POMEGRANATES.—The sub-acid, or sweet variety, at 25 and 50 cents each, according to size.

OSAGE ORANGE PLANTS FOR HEDGING.—A large quantity of vigorous plants, of 1 and 2 years growth, at \$5 to \$8 per thousand.

OSIER OR BASKET WILLOW.—Cuttings of the famous *Beechridgii* at \$10 per thousand, or \$2 per single hundred. Also, the *Viminalis*, at \$5 per thousand, or \$1 per single hundred.

Orders will also be received for choice ROSES, ORNAMENTAL SHRUBS AND TREES, EVERGREENS, VINES, GREENHOUSE PLANTS, &c., &c.

The various Railroads diverging in almost every direction from Augusta, afford ample facilities for shipping to any part of the South. Trees will be carefully packed and forwarded by express or otherwise, with safety and despatch.

From middle of October until first of February is the proper time for transplanting—the earlier in the winter the better. Purchasers will be furnished with such (printed) directions for the planting and management of Trees, &c., as will (if strictly followed) insure success. Address D. REDMOND, Augusta, Ga.

Oct5—tf

1855! GLOAMING NURSERY. 1855!

THE Subscriber having added many additional varieties of Southern Seedling FRUIT TREES to his former stock, comprising some fifty varieties of Apples, one hundred of Pears, twenty of Cherries, twenty of Peaches, Nectarines, &c., and being re-assured of their superiority over those raised in Northern Nurseries, with confidence, founded on experience, again offers them to the attention of Southern Farmers, Planters and Pomologists at such prices as, he hopes, will leave no excuse for continuing to import them. Our trees are all grafted on seedling stocks two years old before grafting, consequently have good roots.

R. K. LACHLIN, Esq., 148 Carondelet street, New Orleans, is our Agent for Mississippi, Louisiana, and Southern Alabama.

* Catalogues for 1855 sent (gratis) to all applicants.

J. VAN BUREN, Chicksville, Habersham Co., Ga.

Aug55—4t

FOR SALE!

A SEA Island Cotton Plantation, containing 900 acres, 400 of which is cleared and ready for cultivation; it is beautifully located on the west end of Skidaway Island, in Chatham county, on a bold salt water river, the health of which is unquestionable, and the facility for manuring with marsh mud is unsurpassable, the land lying three sides on the river. The place is situated 11 miles from Savannah. The lands of Skidaway Isle, under proper cultivation, produces equal to any, in Corn or Sea Island Cotton. This place is situated eligibly to supply any quantity of fish and oysters and for stock raising. Price \$3,500. Terms accommodating. Apply to S. F. DUPON, Savannah.

Isle of Hope, March 9, 1855. April—tf

VERBENAS.

THE Subscriber would respectfully invite the attention of Florists and all lovers of this beautiful bedding plant to his extensive collection, numbering upwards of 300 varieties, and comprising every variety worthy of cultivation that has been sent out, up to the present time. Price from \$1 to \$3 per dozen.

Descriptive Catalogues sent to all applicants, enclosing a penny stamp. As he devotes his time exclusively to the raising of this particular flower, he feels confident that he can give entire satisfaction.

Fine strong and well wooded plants ready to send out by the middle or last of October. Address DEXTER SNOW, Chicopee, Hampden Co., Massachusetts.

Oct55—3t*

ORIGINAL NOVEL BY N. P. WILLIS.

THE HOME JOURNAL FOR 1856.

NEW AND BRILLIANT SERIES.

ON the fifth of January next, the first number of the New Series for 1856, of this well known Family Newspaper will be issued, with new type and new attractions; the principal one is of the kind which has been proved, by both American and European periodicals, to be the most acceptable and popular, viz:—A Novel in serial numbers. The title is "PAUL FANE; OR PARTS OF A LIFE ELSE UNFOLD, a Novel" by N. P. Willis.

In addition to this new feature, a series of original sketches, songs and ballads by G. P. Morris and an original *nocturne*, in verse, to be read upon fact, called "The Story of a Star," by J. M. Field, are among the inducements for new subscribers to commence with the first number of the year.

Besides the contributions and labor of the Editors, the Home Journal will contain the Foreign and Domestic Correspondence of a large list of contributors—the *Epics* of the European Magazines—the selections of the most interesting publications of the day—the brief novels the pictorial stories—the sparkling wit and amusing anecdotes—the news and gossip of the Paris papers—the personal sketches of public characters—the stirring scenes of the world we live in—the chronicle of the news for 1855—the fashions—the facts and outlines of news—the pick of English information—the wit and humor and pathos of the times—the essays on life, literature, society and morals, and the usual variety of careful choosings from the wisdom of English periodical literature, criticism, poetry, &c. We need not remind our readers that we have also one or two unsurpassed correspondents in the *factious* society of New York, who will give us early news of every new feature of style and elegance among the leaders of the gay world.

TERMS.—For one copy, \$2; for three copies, \$5—or one copy for three years, \$5—always in advance.

Subscribe without delay. Address MORRIS & WILLIS, Editors and Proprietors, 107 Fulton street, New York.

DEVON GRADE HEIFERS FOR SALE.

SEVERAL GRADE OR HALF DEVON HEIFERS, of various ages, from excellent Milking Cows, and sired by the prize Bull, "Keokuk," whose pedigree was published in September number (1855) of *Southern Cultivator*. For particulars of price, &c., address D. REDMOND, Augusta, Ga.

F. McCREERY, Charleston. R. M. HOOKE, Chattanooga.

McCREERY & HOOKE,

COTTON FACTORS, COMMISSION AND FORWARDING MERCHANTS, Brown's Wharf, Charleston, S. C.

Strict attention given to the sale of all Country Produce and Manufactures, to the receiving and forwarding of Freight, and to the filling of orders in this market. Feb55—City

DOMESTIC ANIMALS AT PRIVATE SALE.

L. G. MORRIS' Illustrated Catalogue, with prices attached, of short Horned and Devon BULLS, and Bull CALVES; a few HORSES; South Devon RAMS; Berkshire, Suffolk and Essex SWINE, will be forwarded (if desired) by addressing L. G. MORRIS, Fordham, Westchester county, N. Y., or A. J. BECAR, 187 Broadway, N. Y. It also contains portrait, pedigree and performance on the Turf of the celebrated horse, "*Blanchard*," standing this season at the Herdsdale Farm. June55—tf

GEORGIA RAILROAD.



CHANGE OF SCHEDULE.

PASSENGER TRAINS.

LEAVE Augusta, daily at 6 A. M. and at 5 P. M.
Arrive at Augusta daily at 5 A. M. and at 6 P. M.
Leave Atlanta daily at 8.50 A. M. and at 6.15 P. M.
Arrive at Atlanta daily at 2.50 A. M. and at 3.36 P. M.

CONNECTING WITH ATHENS BRANCH.

Arriving and leaving Union Point daily (Sundays excepted) at 10 A. M. and leaving at 2.30 P. M.

WITH WASHINGTON BRANCH.

Arriving at Cumming daily (Sundays excepted) at 9 A. M. Leaving " " 3.30 P. M.

WITH SOUTH CAROLINA TRAINS.

Leaving Augusta daily at 9.40 A. M. and 9.50 P. M.
Arriving at Augusta daily at 8.00 P. M. and 4.30 A. M.

WITH ATLANTA AND LAGRANGE RAILROAD.

Leaving Atlanta, daily at 3.30 A. M. and 4.45 P. M.
Arriving at " " 7.15 A. M. and 5.35 P. M.

WITH WESTERN AND ATLANTIC RAILROAD.

Leaving Atlanta daily at 9 A. M. and 6 P. M.
Arriving at " " 8 A. M. and 3 P. M.

GEOR. YONGE, General Superintendent.

July 14, 1855. Aug 5—tf

SOUTHERN CULTIVATOR FOR 1854.

BOUND volumes of the CULTIVATOR for 1854 may now be obtained at this office. Price, \$1.50. Or we will send it by mail, post-paid, at \$1.80. Address WM. S. JONES, Augusta, Ga.

RANDALL & MERCER'S COTTON SEED DRILL.

ALL Planters have realized the want of a machine to drill Cotton Seed with regularity and certainty. One that would operate equally well on every kind of land, and at the same time be so simple in construction and operation that it could be used by negroes without the liability of getting out of order. A Drill which we think possesses all these qualities, we now offer to the planting community. After a thorough trial for the last two years, in different hands, on all kinds of land, we would state some of the advantages to be derived from their use:

1st. The saving of Seed, which will amount to enough in planting each hundred acres, to pay for the machine.

2nd. The saving of labor in planting, one horse and hand only being required to open the furrow, drop the seed and cover from seven to nine acres per day.

3rd. The great saving of labor in chopping out, the seed being deposited in a line one after another.

4th. The great saving in subsequent hoe work, owing to the fact that any good plow hand can, in siding, cover all the first crop of grass in the drill, however small the cotton may be, without injuring the stand.

These advantages all farmers will appreciate; and below we give some certificates, from which the public can learn how our Drills are appreciated by gentlemen of the first standing in our section of the State—all practical farmers who have thoroughly tested them and are consequently fully competent to decide on their merits. We are now prepared to dispose of our rights to Counties and States on favorable terms. Here is an opportunity for a large number of young men to make fortunes, as the rights we offer are for a machine which every planter South will be obliged to have, and this is the first Cotton seed Drill ever invented which possessed advantages sufficient to bring itself into general use. Mr. J. P. STROZIER is our Travelling Agent, to dispose of the Patent Right for Counties and States.

CERTIFICATES.

This is to certify that I planted one hundred and sixty acres of cotton with Randall & Mercer's Planters, and I consider them superior to anything of the kind I have ever seen or tried. The saving of seed alone would pay for the machines in a season or two, and I think a hand can do one-third more hoeing than he could in cotton planted the common way.

S. L. BARBER.

Lee County, Ga., July, 3, 1855.

MESSRS. RANDALL & MERCER—Gentlemen:—In reply to yours of this date, I can say with satisfaction, that I have used your Cotton Seed Drills on the farm of D. A. Vason, Esq., with great success. I consider them to be of great value. They are a saving of about one-third of the labor of cultivating, about two or three bushels of seed to the acre in planting, and a great saving of labor in planting, as they open the furrow, drop and cover the seed with one horse and hand. I think them worth one hundred dollars a piece to any planter that plants full crops of cotton. As for myself, I would not plant a crop of cotton without them for no consideration in the bounds of reason.

Yours, very respectfully, A. J. BARKSDALE.

Lee County, Ga., July 12th, 1855.

I have used Randall & Mercer's Cotton Planter two seasons, and consider them of great value to the farmer. I save seed enough each year to pay for the Planters, then I save at least one-third the labor of cultivation, as the cotton is sowed in so narrow a line that with good plowing there is but little hoe work needed. There is also a saving of hands and horses in planting. I should say they were worth one hundred dollars each, and recommend every farmer to use them.

S. D. McLENDON.

Lee County, Ga. July 9, 1855.

I have been overseeing for Mr. S. D. McLendon, the present year, and fully concur in his statement above.

DAVISON WARREN.

MESSRS. RANDALL & MERCER—Gentlemen:—I used one of your Cotton Seed Drills the past spring, and I feel four fold paid for what it cost me. To give your Drill a fair trial, I planted every other row with the Drill and the intervening rows I planted as well as ever cotton was planted before your Drill came into use. The result was, that in the row planted with your Drill I got a more perfect stand, and I think it grew off much better, besides I realized a great saving in the labor of working over my cotton the two first times. I shall continue to use them as long as I plant cotton.

I remain yours, &c.,

JESSE COOK.

Lee County, Ga.

This is to certify that I used one of Randall & Mercer's Cotton Seed Drills last year in planting my crops and was well pleased. I have used five of them the present year, planting my entire crop, and am still better pleased. There is a saving of between two and three bushels of seed to the acre in planting, besides, one horse and one hand with these drills does the work of three hands and two horses. Then there is a saving of two-thirds of the hoe work, the cotton being in so straight and narrow a row. I consider them worth one hundred dollars each to any planter, and recommend all to purchase and use them.

WM. H. OWENS.

Dougherty County, Ga., July 16, 1855.

MESSRS. RANDALL & MERCER—Gentlemen:—In reply to yours, I will only say I have used three of your Cotton Seed Drills, and consider them of great value, from the fact that in the use of them I saved from two to three bushels of seed to each acre planted, and at least one-third of the labor of cultivation, not requiring one-half as much hoe work as the old way of planting. I never expect to plant cotton without them, if I can get them at any price. I have planted eight acres

per day to each Drill. They are simple—easily managed, and there is no difficulty about getting a good stand. Very respectfully,

WM. F. HAMRICK.

Lee County, Ga., July 12, 1855.

MESSRS. RANDALL & MERCER—Gentlemen:—I have used eight of your Cotton Seed Drills, manufactured by J. H. Watson, on Col. Joseph Bond's Fowl Town Plantation. I am much pleased with them, having realized great saving of seed, of labor in planting and chopping out, and the hands at the first siding could go over at least one-third more in a day, and do better work than in cotton planted in the best way I could plant with colter and block. I have no hesitation in giving it as my opinion that in the use of your Drills there is a saving of one-third of the labor of cultivating a cotton crop. Col. Bond is pleased with them and will continue their use.

Yours respectfully,

JAMES CHEEK.

Fowl Town, Ga., July 9, 1855.

This is to certify that I have used two of Randall & Mercer's Cotton Planters, and have no hesitation in saying that they will do. The saving of labor in planting is an object, the saving of seed is an object and the cotton stands in such a narrow drill that it may almost be kept clean without the hoe. There is nothing to equal them in planting cotton.

W. B. REYNOLDS.

Lee County, Ga., July 1, 1855.

Deeming the above a sufficient amount of evidence as to the great value of our Drills, we would simply state that any information desired concerning them or the patent, can be obtained by addressing us at this place.

RANDALL & MERCER.

Pulmra, Leeco, Ga., Nov., 1855.—tf

DOWNING HILL NURSERY.

THIS establishment has been greatly enlarged during the past season, and now embraces one of the largest and best collection of FRUIT TREES, VINES, &c., in the South. It is the determination of the proprietors (and they are now preparing) to extend their operations so as to compete, in extent, quantity and variety, with any Nursery in the whole country; and they sincerely hope that the Southern country will patronize, with a fair liberality, this useful and necessary branch of industry, and not give the preference to Northern Nurseries, as has hitherto been the custom.

We have on hand a very large stock of TREES, consisting of 150 varieties of Apples, including 75 Southern varieties; 91 of Pears; 25 of Plums; 20 of Cherries; 12 of Nectarines; Almonds, Figs, Raspberries, Mulberries, Pomegranates, Grap s, Quinces and Strawberries; a fine and large collection of Roses on their own roots, together with a fair choice Green-House and Evergreen Plants; Shrubby, &c., &c.

This being one of the finest local ties in the South for the propagation and raising of Fruit Trees, combined with its shipping facilities, enabling us to send packages to every part of the country, renders it a desirable point from which to order them. The greatest care and diligence will, at all times, be observed to please and satisfy those who will be kind enough to oblige us with their orders.

Descriptive Catalogues on application.

W. H. THURMOND & Co.,

Atlanta, Ga.

Nov55—tf

TROUP HILL NURSERY, MACON, GA.

THE SUBSCRIBER offers for sale a fine assortment of grafted FRUIT TREES of superior quality, comprising all the best new Southern varieties.

His collection of Ever-blooming ROSES is unrivalled in the South. Further—30 new varieties of CHRY'S ANTHEMUS; 50 varieties of VERBENAS, the best on both sides of the Atlantic; DAHLIAS, EVERGREENS, etc., etc. Address

ROBERT NEWSON,

Nov55—tf

Macon, Ga.

BLACK ESSEX PIGS.

FOR SALE, a few pairs, three to four months old at \$20 per pair. For Lot Hogs, I consider this breed superior to any other—they cannot be made to take the mange, and are free from cutaneous eruptions and diseases of the lungs, to which hogs are so liable when confined in dry pens in a Southern climate.

Nov55—tf

Address

R. PETERS, Atlanta, Ga.

J. M. NEWBY & CO.,

(Augusta, Ga.)

UNDER THE UNITED STATES HOTEL.

WE have just received the largest and choicest lot of fine CLOTHING they have ever offered to their customers and the public. Those in want of the newest styles of goods are invited to call and look at them. Also, a fine lot of Boys' and Youths' CLOTHING.

Nov55—3t

PATENT SELF-SHARPENING STRAW AND SHUCK

Cutters.

WE call the attention of Planters to our Self-Sharpener Straw and Shuck CUTTERS. The only Knife which will cut Shucks Stalks and Straw to perfection, and sharpen itself.

Nov55—3t

JOHN & THOS. A. BONES.

GRADE CASHMERE GOATS.

FOR SALE, a few half blood BUCKS at \$30 each.

[Nov55—tf]

Address

R. PETERS, Atlanta, Ga.

FERTILIZERS.

HITHERTO the Planters of the South have been dependent on the North for all the artificial fertilizers they have used. The New Orleans Bone Black Company recently established in this city, with facilities for the manufacture of manures second to none in the United States, are prepared to fill orders for the following FERTILIZERS at the same prices charged in Baltimore and New York:

GROUND BONES.—For fruit trees and grape vines these are particularly beneficial. Five hundred pounds applied to an acre of ordinary pine wood land, aided by good, deep plowing, will produce a crop of Cotton as large as any of the best bottom lands. It is ground both fine and coarse, and is put up in barrels. The coarse is 1½¢ per pound—the fine and sifted, 1¼¢ per pound. Its great durability in the soil renders it the cheapest manure in use.

PHOSPHATED GUANO.—This valuable fertilizer, composed of equal parts of Peruvian Guano and fine Bone Dust, is, in every respect, superior and far more lasting than Guano used by itself. It is an established fact that Guano lacks Phosphate of Lime, and also, that one half of its fertilizing qualities are dissipated in the air, which is plainly to be perceived by the strong ammoniacal smell constantly emitted by it until its strength is gone.

Bone Dust is nothing more than Phosphate of Lime, and this, besides being a strong and valuable manure, fixes the Ammonia in the Guano and retains it until it is absorbed by the plants. A trial of this fertilizer will satisfy any one of its durability and superior efficacy to simple Guano. Three hundred pounds applied to the acre will show its effects for five years or more, by an annual increase of at least 10 percent. in the crops. Put up in barrels of about 200 pounds each, at 2 cents per pound.

SUPER-PHOSPHATE OF LIME.—This highly concentrated manure is composed of Animal Matter, Sulphuric Acid, Bone Dust, Gypsum and Sulphate of Iron, each of which, by itself, is a powerful fertilizer.

Five hundred pounds, or about two barrels of this Super-Phosphate of Lime have been found to be fully equal, in beneficial effects, to thirty wagon loads of ordinary Stable Manure.

The convenience of this article consists in its small bulk and consequent ease of handling. It may be used before or after planting of the crop. A table-spoonful put in each hill of Corn or Cotton, has been known to increase the yield twenty percent. Five hundred lbs. to an acre of common piney woods land having a clay subsoil, will enable it to yield as good a crop as any ordinary bottom land. A single hundred pound applied as a top-dressing to an acre of meadow land, will increase its products at least a ton of hay. To Horticulturists, it is invaluable, as it may be applied to Fruit Trees at any season of the year. More than two thousand bushels of Ruta Baga Turnips have been raised to the acre, by the application of 200 lbs. of this fertilizer. For Garden crops, it is all that is necessary for success.

The Super-Phosphate of Lime is put up in barrels containing about 200 pounds, and is sold at 2 cents per pound.

POUDRETTE.—Two large establishments in New York, turning out over fifty thousand barrels annually, are not able to supply the demand of the market gardeners in the vicinity of that city for this justly popular manure. It is composed of night soil, deodorized and made into a powder similar to Guano, and is put up in barrels at \$2.50 per barrel.

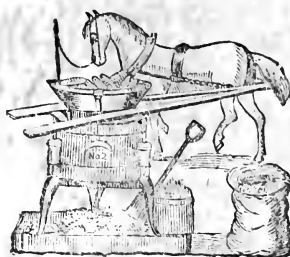
Orders by mail or otherwise, addressed to the subscriber, will receive prompt attention.

D. C. LOWBER,

37 Poydrass street.

Land Plaster, Peruvian Guano and Land Lime may also be ordered at the above address. July—tf

SCOTT'S LITTLE GIANT CORN AND COB CRUSHER.



THE attention of Planters and Stock-Feeders is respectfully called to this Mill, as the best and most profitable article now in use. In setting up, no mechanical work is required, it being only necessary to fasten it down to a floor or platform.

No. 2 will crush 10 bushels per hour with one horse, and it is sold for \$55, all complete, ready for attaching the horse.

No. 3, at \$65, grinds 15 bushels per hour; and No. 4, at \$75, grinds 20 bushels per hour with two horses.

CARMICHAEL & BEAN, Agents,
Augusta, Ga.

Augusta, Ga., April 3, 1855.

I have been running one of *Scott's Little Giant Corn and Cob Mills*, No. 4, for the last five weeks, and it performs to my entire satisfaction. It was warranted to grind 20 bushels per hour, but I have ground over 35 bushels in an hour and a half, or equal to 23½ bushels per hour. In feeding 30 horses, I save at least 100 bushels of Corn per month, it now requiring only 200 bushels of Corn with the cob, where I formerly fed 300. I consider it decidedly the best kind of Crusher ever got up, and if I could not replace mine I would not sell it for \$500.

L. D. MATHEWS,

Proprietor of the Augusta Omnibuses.

EXTENSIVE COLLECTION OF SELECTED ROSES AND

SOUTHERN RAISED FRUIT TREES.

AUGUSTA NURSERY.

F. A. MAUGE would respectfully inform the amateurs of and rare varieties, which he has now a superb collection of new as may desire them. His prices to Nurserymen will be as low as those of any Nursery at the North, and his Rose Bushes will be generally of a larger size. He has also made recent additions to his stock of FRUIT TREES, and can now supply fine sorts of the following varieties: Apples, Pears, Quinces, Peaches, Nectarines, Apricots, Plums, Cherries, Soft Shelled Almonds, English Walnuts and Hazelnuts.

Also, GREENHOUSE PLANTS, such as Camellia Japonica, Orange and Lemon Trees, &c., and hardy flowering and Ornamental Shrubs. Also, 60 varieties of the most rare and beautiful DAHLIAS. Orders from the country will be promptly attended to, and Trees and Shrubs carefully packed and directed.

Catalogue of Roses and Fruit Trees will be sent gratis to all post-paid letters. Address F. A. MAUGE.

Nov—tf

Augusta, Ga.

P. D. GATES,

COMMISSION MERCHANT,

AND Dealer in AGRICULTURAL IMPLEMENTS and MACHINERY, No. 12 Broadway, New York.

Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Powers and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines. June5—City*

75,000 FRUIT TREES

OF Southern growth and perfectly adapted to this climate, are now offered for sale at the Mississippi Nurseries. Persons in want of superior FRUIT TREES at moderate prices would do well to send in their orders early. We can supply the Apple in 450 varieties from 1 to 4 years old; the Pear in 450 varieties, both Standard and Dwarf, from 1 to 8 years old; the Peach in 100 varieties from 1 to 3 years old, and other fruits in all the best varieties. The celebrated Southern Seedling APPLES and new European PEARS can be supplied in limited quantities.

Priced Catalogues sent to all applicants, and all orders promptly attended to. Address C. M. SWASEY & CO., Yazoo City, Miss. Oct5—6t

AGRICULTURAL MACHINES AND IMPLEMENTS.

SMUT MACHINES—Luck's or Pilkington's—the best and cheapest made. Price \$60. HORSE POWERS and THRESHERS; Allen's and Emery's superior Endless Chain and Taplin's or Eddy's, Trimble's, Bogardus and other CIRCULAR HORSE POWERS. THRESHERS, with or without Separators. GRAIN MILLS, CORN SHELLERS. PLOWS of all kinds, STRAW CUTTERS, &c. Also, a general assortment of the best made and most approved Agricultural and Horticultural IMPLEMENTS. Field and Garden SEEDS, GUANO, BONE DUST, &c. For sale by R. L. ALLEN, Oct5—3t* 159 and 191 Water street, New York.

CARMICHAEL & BEAN,

DEALERS in HARDWARE, CUTLERY and AGRICULTURAL IMPLEMENTS, Augusta, Ga.

We are, also, Agents for the following articles:—SALAMANDER SAFES, made by Stearns & Marvin, New York; LITTLE GIANT CORN AND COB MILLS; Indian Rubber BELTING, PACKING and HOSE, made by Boston Belting Company; ATKINS' SELF RAKING REAPER; CIRCULAR SAWS, made by Hoe & Co., and Welch & Griffith's HORSE POWERS; FAN MILLS, THRESHERS and SMUT MACHINES. CARMICHAEL & BEAN, April5—City Augusta, Ga.

TO THE FARMERS AND PLANTERS OF THE SOUTH.

THE undersigned have received the exclusive Agency for the entire South and Southwest for the very best CORN and COB CRUSHERS now in use, and the only articles of the kind that will make fine meal, suitable for the table—this they are guaranteed to do. These Mills will effect a saving of 23 per cent., or fully one-third, in crushing the food prepared for stock, as has been satisfactorily tested. Price from \$50 to \$75. Every Farmer and Planter in the land should have them.

Manufactured and for sale by W. S. HENRY & Co., Meeting street, near Line street, Charleston, S. C.; MCCREERY & HOOKE, Brown's Wharf, Charleston, S. C., and J. A. ASKLEY, Commission Merchant, Broad street, Augusta, Ga.

Aug5—5t

LANGLEY & CO., General Agents,
Charleston, S. C., and Nashville, Tenn.

GREENE'S PURE WHITE WHEAT.

IHAVE a very superior kind of WHITE WHEAT that I will engage to those who may want to purchase for seed wheat of the next crop, to be delivered at the La Grange depot in good, strong sacks, containing not more than one bushel unless ordered, nor less than a half; marked with the name of the purchaser and place of delivery. This Wheat is of the very earliest and best kind. Sow any time in November, and cut by the 20th of May. It has been exhibited at four different Fairs, and have obtained a premium in every instance. I have already made many engagements for the next sowing at five dollars per bushel. No Delivery no pay.

P. H. GREENE

La Grange, March 22d, 1855.

April5—tf



